

CENTRAL ASIAN ANTIQUITIES.

The Central Asian Antiquities which are comprised in the British Collection distribute themselves into the following main classes: (1) manuscripts; (2) xylographs; (3) terra-cottas and pottery; (4) coins and seals; and (5) figures of stone, metal or wood, and other miscellaneous objects.

As the coins present the most serviceable historical and chronological data, it may be best to commence with their description.

SECTION I.—COINS AND SEALS.

The following is a Summary of the Coins in the Collection:—

I. Indo-Chinese	coins, 72
II. Chinese	„ 148
III. Scytho-Bactrian	„ 36
IV. Indo-Scythian	„ 10
V. Sassanian	„ 7
VI. Mediæval Hindū	„ 8
VII. Mediæval Muhammadan	„ 127
VIII. Modern Turkī	„ 18
IX. Modern Indian	„ 59
X. Modern European	„ 1
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Total Coins	486

I. INDO-CHINESE COINS.

There are altogether seventy-two of these coins in the Collection: nine large and sixty-three small ones. They all come from Khotan and

its neighbourhood; and they formed part of the consignments M. 2, M. 3, M. 6, M. 9, G. 5, G. 7, G. 10, and T. 1.

Two coins of this description, one large and one small, were first published by Mr. Gardner in the *Numismatic Chronicle*, Vol. XIX (1879), pp. 275, 276. These likewise were procured from Khotan by Sir T. D. Forsyth. They have been republished by Dr. Terrien de Lacouperie in the *British Museum Catalogue of Chinese Coins*, p. 394. The large one is also republished in the *British Museum Catalogue of Indian (Greek and Scythic) Coins*, p. 172. Both coins, especially the small one, were in too imperfect a condition to admit of being fully read. In the present collection there are some much better preserved specimens.

All these coins are of copper. They are not of iron, as was at first erroneously supposed.

Of the large coins, there are three varieties, distinguished by the arrangement of the obverse legend. Of these varieties there are one, three and one specimen respectively. Four specimens cannot be determined. Of the smaller coins there are five varieties, distinguished by differences in the reverse design, and in the arrangement of the legends. Of these five varieties there are 17, 13, 3, 3 and 3 specimens respectively. Twenty-three specimens are too worn or corroded to admit of being determined.

The following is a detailed list of all the coins, large and small, with their weights and measures. Their exact find-place has also been noted, when known: in the other cases it must be understood that the coin came either from Khotan itself or from one of the buried sites near it:—

(a) Large Coins.

Ser. No.	Variety.	Weight in grains.	Size in inches.	Consign-ment.	Find-place.	Figure.
1	I	246·5	1·0	M. 2.		Plate I, 6.
2	II	228·0	1·0	T. 1.		
3	II	200·5	1·0	G. 10.		
4	II	154·0	0·875	M. 9.		
5	III	234·0	1·0	G. 10.		
6	Undeterm.	223·0	1·0	M. 2.	Aq Safil.	
7	do.	213·0	1·0	M. 2.		
8	do.	211·5	1·0	G. 10.		
9	do.	202·0	1·0	M. 2.		

Total weight : 1921·5

Average weight : 213·44 grs.

(b) Small Coins.

Ser. No.	Variety.	No.	Weight.	Size.	Consign-ment.	Find-place.	Figure.
1	I	1	76·0	0·75	M. 2.		Pl. I, 9.
2	I	2	66·0	0·75	M. 2.		
3	I	3	59·0	0·75	M. 2.		Pl. I, 13.
4	I	4	56·5	0·75	M. 2.		Pl. I, 10.
5	I	5	53·0	0·75	G. 10.		
6	I	6	52·0	0·75	M. 3.		
7	I	7	52·0	0·75	G. 10.		
8	I	8	50·5	0·75	M. 6.		
9	I	9	50·0	0·75	M. 2.		Pl. I, 11.
10	I	10	48·5	0·75	G. 5.		Pl. I, 8.
11	I	11	48·5	0·75	M. 2.		
12	I	12	46·5	0·75	G. 7.		
13	I	13	45·0	0·75	M. 2.	Aq Safil.	
14	I	14	41·5	0·75	G. 5.		Pl. I, 18.
15	I	15	39·5	0·625	M. 2.		
16	I	16	32·0	0·625	M. 2.		
17	I	17	21·0	0·625	M. 2.	Aq Safil.	
18	II	1	78·5	0·75	M. 2.	do.	
19	II	2	62·5	0·75	M. 3.		
20	II	3	61·5	0·75	M. 6.		
21	II	4	59·5	0·75	T. 1.		
22	II	5	57·5	0·75	M. 2.	Aq Safil.	Pl. I, 14.
23	II	6	53·0	0·75	T. 1.		Pl. I, 15.
24	II	7	51·5	0·75	T. 1.		Pl. I, 12.
25	II	8	50·0	0·75	M. 2.	Aq Safil.	
26	II	9	49·0	0·75	G. 7.		
27	II	10	48·0	0·75	M. 6.		
28	II	11	46·0	0·75	M. 2.	Aq Safil.	
29	II	12	44·0	0·75	M. 9		
30	II	13	44·0	0·75	G. 10.		
31	III	1	61·5	0·75	M. 6.		
32	III	2	48·5	0·75	T. 1.		Pl. I, 16.
33	III	3	47·0	0·75	G. 10.		Pl. III, 3.
34	IV	1	40·0	0·75	M. 2.		
35	IV	2	30·0	0·625	M. 2.		Pl. I, 17.
36	IV	3	22·5	0·70	G. 10.		Pl. III, 1.
37	IV	4	13·0	0·5	M. 2.	(Mutilated).	Pl. III, 4.
38	V	1	63·5	0·83	G. 10.		Pl. III 2.
39	V	2	60·5	0·75	G. 10.		
40	V	3	59·0	0·80	G. 10.		
41	Undeterm.	1	60·0	0·75	M. 2.		
42	do.	2	59·0	0·75	M. 9.		
43	do.	3	58·5	0·75	G. 10.		
44	do.	4	57·0	0·75	G. 10.		
45	do.	5	55·0	0·75	M. 3.		

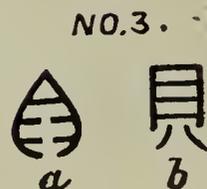
Ser. No.	Variety.	No.	Weight.	Size.	Consign-ment.	Find-place.	Figure.
46	Undeterm.	6	54.5	0.75	M. 2.		
47	do.	7	54.0	0.70	G. 10.		
48	do.	8	50.5	0.75	G. 7.		
49	do.	9	49.5	0.75	M. 3.		
50	do.	10	48.5	0.75	G. 10.		
51	do.	11	48.0	0.75	M. 2.	Aq Safi.	
52	do.	12	47.5	0.75	G. 10.		
53	do.	13	47.0	0.75	M. 2.	do.	
54	do.	14	40.5	0.75	M. 2.	do.	
55	do.	15	40.5	0.625	G. 10.		
56	do.	16	39.5	0.75	G. 7.		
57	do.	17	39.5	0.69	M. 2.		
58	do.	18	35.5	0.69	M. 2.		
59	do.	19	34.0	0.75	G. 10.		
60	do.	20	33.5	0.75	M. 2.	Aq Safi.	
61	do.	21	26.0	0.583	G. 10.		
62	do.	22	25.0	0.625	M. 2.		
63	do.	23	24.0	0.625	M. 9.		

Total weight: 3015.0 Average weight: 47.857 grs.

The following is a description of the coins:—

(a) Large Coins. (Plate I, No. 6).

Obverse: Two concentric circles, of which the outer one consists of an ornamental band. In the small area within the inner circle is placed an old form (a) of the Chinese symbol (b) for 'money.' See Woodcut No. 3. Between the area and the ornamental band runs a Chinese legend, consisting of six symbols. This legend is arranged in three different ways, making three varieties, on which see below, p. 8.



Reverse: Two concentric linear circles; in central area, bare horse with stiff, upstanding mane, trotting to right. Between the circles, an inscription in Kharoṣṭhī characters.

No. 1 of the list, shown in Pl. I, 6, is nearly identical with that figured in the British Museum Catalogue, p. 394, but the Chinese legend, partially read by Dr. T. de Lacouperie, is far more legible.

(b) Small Coins. (Plates I, 8-18 and III, 1-4).

Obverse: Chinese legend of three symbols, in old forms; the same on all five varieties.

Reverse: In first and second varieties, bare horse, standing or walking to right; round it a circular marginal legend in Kharoṣṭhī characters, showing in the first variety the letter *ma* (of *mahārāja*), in the second variety, the letter *ti* (of *uthabirāja*), over neck of horse.

The third variety has a Bactrian two-humped camel standing to right, and the same Kharoṣṭhī legend as on the large coins, with *ma* over head of camel.

The fourth variety has the bare horse, walking to right; within a circular linear area, outside which is the Kharoṣṭhī legend, with *mahā* opposite the tail of the horse, but very incomplete.

The fifth variety has a camel walking to right, led by a man, surrounded by a marginal legend in Kharoṣṭhī, with *ma* over the head of the camel. Unfortunately both figure and legend in all three specimens are too badly preserved to admit of being fully deciphered.

(c) The Kharoṣṭhī Legend.

The Kharoṣṭhī legend occurs in two different versions: a longer and a shorter one. The former which consisted probably of 20 letters is found on the large coins and on the small coins of the third (or camel) variety. The shorter legend, comprising probably 13 letters, is found on the small coins of the first, second and fourth (or horse) varieties. The length of the two legends can easily be calculated from the space distributable to the preserved and lost portions respectively. What the legend on the small coins of the fifth variety may have been, it is, at present, impossible to say.

The shorter legend is arranged in three different ways: in the coins of the first variety it commences over the neck of the horse, and in those of the fourth, behind its tail, while in those of the second variety, it probably commenced below its feet. It is fullest preserved on the coins Nos. 1 and 4 of the first and No. 7 of the second variety.

The best readings on coins of the first variety are the following:—

- No. 1 *maharajutha(bi) × ja* *Gugrama(d)asa* (Pl. I, 9).
 No. 2 *maharayu × × × ×* *Gugratidasa*.
 No. 3 *maharayu × × × ×* *Gugra(mad)asa* (Pl. I, 13).
 No. 4 *maharayutha × ra ×* *Gugramodasa* (Pl. I, 10).
 No. 7 *mahara(ja) × × × ×* *(Gu)gramo(da)sa*.
 No. 10 *maha × × × × × ×* *Gugradamasa* (Pl. I, 8).
 No. 14 *maha(ra) × × × × ×* *Gugra(dama)sa* (Pl. I, 18).

The best readings on coins of the second variety are the following:—

- No. 4 *× × rajuthubi × × × × × × ×*
 No. 5 *× × rajo × bi × × (Gugra) × × ×* (Pl. I, 14).

No. 6	× × <i>rajuthabira</i> ×	× × × × ×	(Pl. I, 15).
No. 7	× × × <i>juthabiraja</i>	<i>Gu(gra)</i> × × ×	(Pl. I, 12).
No. 8	× × × <i>juthubi</i> × ×	× × × × ×	
No. 11	× × × <i>juthabi</i> × ×	× × × × ×	
No. 12	× × × <i>juthabi</i> × ×	× × × × ×	
No. 13	× × × × × × <i>raja</i>	<i>Gugra</i> × × ×	

Of the coins of the fourth variety, any thing of the legend is only visible on No. 2, where the following fragment can be read :

maharaja × × × × × × × ×

The longer legend is found on the coins of the third variety. On these the letters are written in long, narrow shapes, closely crowded together; and calculating from what of the legend is preserved, it may be seen that the face of the coin affords room for 20 letters. On the coins of the second variety, the letters are formed large and square, taking up much more space, so that the surface of the coin, to judge from what remains of the legend, cannot have admitted more than 13 letters. The same is the case with the coins of the first variety, where the letters are formed small and square, but are set wider apart from one another than on the coins of the third variety. On the two coins of the latter variety, the legend reads as follows :

No. 1	× × × × ×	× × × × × × ×	× × <i>ta(sa)</i>	<i>Gugra(da)ma</i> ×
No. 2	<i>maharajasa</i>	<i>ra(jati)</i> × <i>(jasa)</i>	<i>(ma)</i> × × <i>(sa)</i>	<i>Gugramadasa</i> .

(Pl. I, 16).

The same long legend, as already observed, occurs on the large coins, with a slightly different form of the name, viz., *Gugramayasa*. It reads as follows :—

				(Pl. I, 6).
No. 1,	<i>(ma)harajasa</i>	<i>(ra)</i> × × × × ×	× × × × ×	<i>(Gugramayasa)</i>
No. 3,	<i>(mahara)</i> × ×	× × × × × × ×	× × × × ×	<i>(Gu)gra</i> × × <i>sa</i> .

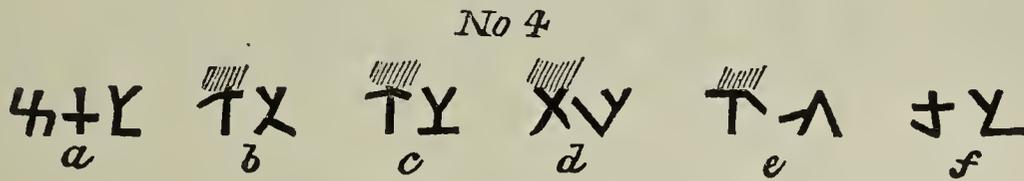
The bracketed letters are distinguishable;¹ the others are perfectly clear. The whole of the visible letters (eleven) occupy slightly more than one-half of the circle; hence the total inscription must have comprised about 20 letters.

Accordingly the complete legends, probably, stood as follows :

- (1) longer legend: *Maharajasa Rajatirajasa Mahatasa Gugramayasa*
(or *Gugramadasa* or *Gugradamasa*),
- (2) shorter legend: *Maharaj-uthabiraja-Gugramadasa* (or *Gugrad-masa* or *Gugramodasa* or *Gugratidasa*). With variants *yuthabi* and *juthubi*.

¹ Some of these bracketed letters do not show sufficiently on the photographs though they are quite distinguishable on the original coin.

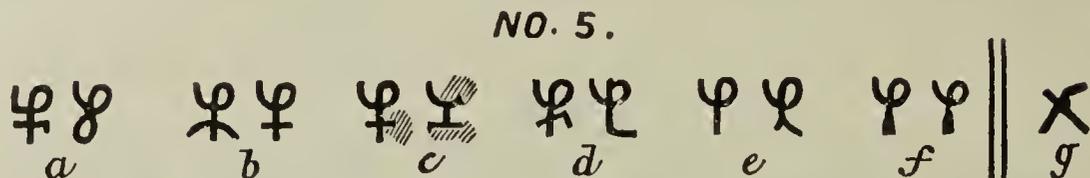
The letters which I read *juthabi* or *yuthabi* (or *juthubi*) are puzzling. Their forms, as seen on some of the coins, are clear enough and are shown in the subjoined Woodcut No. 4. Thus (a) is seen on



Var. II, No. 11, (b) on Var. II, No. 12, (c) on Var. II, No. 4, (d) on Var. I, No. 1, (e) on Var. I, No. 4, and (f) on Var. II, No. 8. Of these (a) signifies *juthabi*, (b, c, d) signify *jutha*, (e) signifies *yutha*, and (f) signifies *juthu*. The form of the syllable *bi* never varies. In (a) and (f) the vowel *u* is formed in an unusual way, but similar to its formation in (d) of Woodcut No. 5, below. I would venture to offer the following explanation, which must be understood to be altogether tentative only. I would suggest that the legend might be the equivalent of the not uncommon title Sanskrit *Prthvī-rāja* or Pāli-Prākṛit *Puthavī-rāja* or *Puthuvī-rāja*, i.e., 'King of the earth.'² The complete title on the coins, accordingly, would run Sanskrit *Mahārāja-prthvīrāja*, or Pāli-Prākṛit *mahārāja-puthavīrāja* or *mahārāya-puthavīrāja*. In Prākṛit, as is well-known, the initial consonant of a conjunct word may be elided, and the resultant hiatus-vowels may be contracted: in the present case °*apu*° may be changed to °*aii*°, and contracted to °*o*° or even to °*u*°. We thus obtain the form of the title *maharāj-uthabīrāja* or *mahārāy-uthabīrāja*, with the provincialism of hardening *v*. This explanation postulates a somewhat advanced stage of Prākṛit phonetic change; but the existence of such a stage in Khotan at the period of these coins is rendered probable by the change of *j* to *y* in the form *mahārāya*.

² I was disposed at one time to find some confirmation of my suggestion in the Chinese *Pi-çi-pi-lien*, which, according to Abel Remusat's *Histoire de la Ville de Khotan*, p. 30, was the royal title of Khotan, and which I thought might represent the Sanskrit *Viçva-rāya* (for *Viçva-rāja*) or 'king of the world,' a synonym of *Prthvīrāja*. The context in Remusat seemed to imply that *Pi-çi-pi-lien* was the title of the Khotanese Kings from ancient times up to the beginning of the 7th century A.D., when the 'Wei-si family (*ibidem*, p. 35) succeeded the Wang family. But from what Prof. Sylvain Levi kindly writes me (15th February, 1899) it appears that *Pi-çi-pi-lien* was only the proper name of a particular king of the Wang family which reigned in the 6th and 7th centuries, A.D. *Pi-çi-pi-lien*, accordingly, is more likely to be the Chinese transliteration of some Turkī name, similar to *Mekelien*.

The two first letters *gugra* of the name appear in the following forms:—



Perhaps the group might also be read *gurga*. The form (a) is the commonest; it occurs in Nos. 2, 3, 4 of the first variety, and can be seen very distinctly in No. 3 (Pl. I, 13); it is also seen in the large coin No. 1 (Pl. I, 6). The form (b) occurs in No. 1, (c) in No. 10, and (e) in No. 14, all of the first variety. The form (f) occurs in the third variety, and the absence of the conjunct marks at the foot of the two letters is accounted for by the crowded state of the legend.

The final letters *dasa* appear in a curiously conjunct form in the coins Nos. 2 and 4 of the first variety. They are shown as (g) in the above Woodcut No. 5. The conjunction is probably merely due to the negligence of the engraver.

There are altogether five varieties of the royal name, all commencing with *Gugra*; viz., *Gugramada*, *Gugradama*, *Gugramaya*, *Gugramoda*, and *Gugratida*. Perhaps *n* may be read for *d* (*Gugramana*, etc.), in every case, or in some of them, seeing that the Kharoṣṭhī *d* and *n* are hardly distinguishable. Seeing also that sometimes *y* occurs for *j* in the title *mahārāja* (*mahārāya*), it may be that, by a similar phonetic process, *Gugramaya* is only another form of *Gugramada*. It is also possible that *Gugramoda* is really intended for *Gugramada*, as what looks like the vowel *o* may be a mere slip of the engraver. In any case there still remain three names which cannot be identified with one another: *Gugramada*, *Gugradama* and *Gugratida*. Accordingly these coins must be ascribed to three, if not five different kings. As all their names begin with *Gugra* (perhaps *Gurga*), they would all seem to have belonged to the same family.

(d) The Chinese Legend.

The Chinese legend, also, occurs in two different versions; a longer and a shorter one. The longer, consisting of six symbols, is found on the large coins, while the shorter, consisting only of three symbols, is seen on the smaller coins.

The longer legend is arranged in four different ways, three of which occur in our collection. In the first variety, the legend commences op-

posite the apex of the central symbol (seen at the bottom of the figure in Plate I, 6) and then runs round from right to left. In the second variety it also commences opposite the apex, but runs in the opposite direction, from the left to the right. In the third variety it commences on the left of the central symbol, and runs round from the left to the right. The British Museum Catalogue, No. 1799*a*, presents a fourth variety, in which the legend runs from the right to the left, and commences on the right side of the central symbol.

In all four varieties the legend is identical, as shown in the subjoined Woodcut No. 6:—



A portion of this legend was read by Dr. T. de Lacouperie, in the British Museum Catalogue, p. 394. I read the whole as follows:—

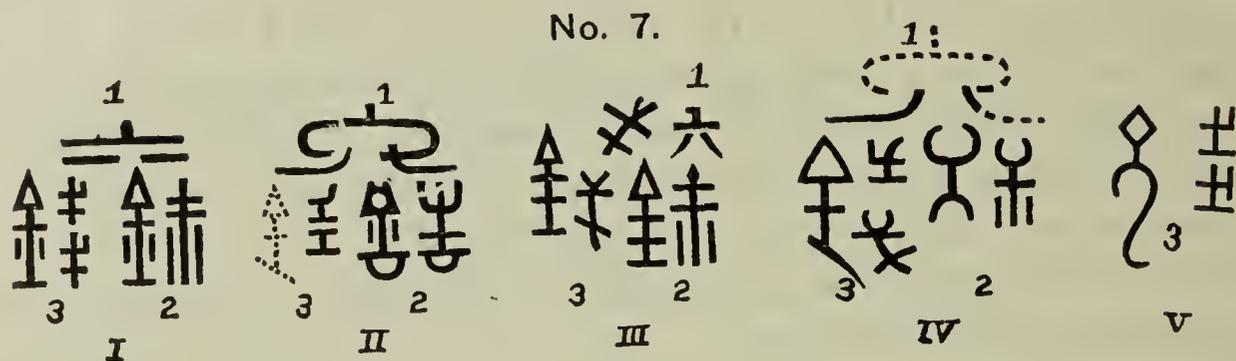
tchung (1) *liang* (2) *sze* (3) *tchu* (4) *t'ung* (5) *tsien* (6), *i.e.*, “Weight (one) Liang (and) four Tchu (of) copper money.”

The symbol which Dr. T. de Lacouperie reads *yh* ‘one’ does not occur in any of the coins of our collection, nor can I find it on the coin figured by him in the Catalogue, No. 1799*a*. The 5th and 6th symbols were too indistinct on his coin to be read by him. They are clear enough on some of our coins, and are those shown in the above Woodcut. No. 6 is the well-known sign for *tsien* or ‘money’ (*British Museum Catalogue*, p. xviii). No. 5 is a sign which I have not been able to find in Morrison’s dictionary,³ the only one available to me; nor is it known to any of the Chinese Literati whom I could consult. I take it to be an old form of the symbol  *t'ung* ‘copper’ (see *ibid.*, p. lxiv), made by omitting the long side-strokes of the upper quadrangle of its right-hand portion. A similar modification occurs in the old form  of the symbol  *kuan* (see *ibid.*, p. 191), and in the old form  of the symbol  *liang* (see *ibid.*, p. 300).

The shorter legend is also identical on all the small coins, though the symbols are drawn in rather varying forms. This is not at all an uncommon practice, as an inspection of the British Museum Catalogue will at once show. The legend, with the varying forms of its symbols,

³ *A Dictionary of the Chinese Language in three Parts*. By R. Morrison, D.D., 1820.

is shown in the subjoined Woodcut No. 7, which also shows the relative position of the three symbols in the legend.



No. I is the usual form, seen in Plate I, 11. Nos. II, III, IV may be seen in Plate I, 8, 14, 16 respectively. No. V shows a form of the 3rd symbol which I have noticed on coins of the 3rd and 4th varieties, shown in Plate III, 1, 3.

I read the symbols as follows:—

luh (1) *tchu* (2) *tsien* (3), *i.e.*, “six Tchu (of) money.”

The second and third symbols of this legend are the same as the fourth and sixth of the longer one. The first symbol, as shown in Figure III, is that given by Dr. T. de Lacouperie, on page xl of his Introduction to the British Museum Catalogue, for *luh* ‘six.’ The corresponding forms in fig. I, II and IV are merely ornamental modifications. A form of *luh*, much like that in fig. II and IV, occurs in coin No. 453, of the Br. Mus. Cat., p. 423. Compare also the forms of *luh* in coins No. 753, 816, 159-161.

The Chinese legends state the weight of the coins. According to them the large coins should normally weigh one *liang* and four *tchu*, while the small coins should weigh six *tchu*. As we shall see presently, these Indo-Chinese coins must be referred to the first and second centuries A.D., *i.e.*, to the time of the Han dynasty in China. That dynasty followed the monetary system of the preceding Tsin dynasty which had doubled the ancient standard. According to this doubled standard the *liang* weighed about 195 grains, and the *tchu*, about 8·12 grains.⁴ Accordingly the normal weight of the large coins should be approximately 227·48 grains, and of the small coins, 48·72 grains. A reference to the preceding list (see pp. 2-4) will show that the actual weights of the coins vary widely from this normal, even fully allowing for much wear and tear. This, however, was the usual condition of the currency in China. Dr. T. de Lacouperie in his Introduction to the British Museum Catalogue (pp. xxiii, xxiv) shows how numerous the variants in weight were, and how “far they were from being

⁴ See Introduction to the Br. Mus. Cat., pp. xlii-xliv.

approximate to the current standard." The variations of the actual from the normal weight appear to have been particularly great under the Han dynasty, for the intermediate usurper Siu Wang Mang (6–25 A.D.) "began by annulling the decrees enacted by the Han dynasty, as he wanted to return to the money of the Tchou dynasty, where 'the mother and the child' (*i.e.*, divisionary piece) weighed in proportion to each other, similarly to those issued by king Wang in 523 B.C."⁵ In order to see how far the Indo-Chinese coins conform to the normal weight, we must test them by their average weight. Judged by this test they, curiously enough, very nearly agree with what should be their normal weight. For the average weight of the nine large coins is 213.44 grains (normal 227.48),⁶ and of the 63 small coins, 47.857 (normal 48.72). The agreement in the case of the large coins would probably be still greater, if we had a larger number of them to make up the average.

The date of these Indo-Chinese coins can be approximately determined by the following considerations. The fact of their superscriptions being in Indian and Chinese characters and language shows that both those languages must have occupied a recognised position in Khotan at the time when the coins passed current. In the case of the bilingual Indo-Greek coins, Indian was the language of the population of the country, while Greek was the language of the administration or the ruling power. Khotan, so far as known to us, never had a Chinese population; but it fell under the power of China at a very early date. In the sixth year of the Emperor Ming-ti of the Later Han dynasty, in 73 A.D., Kuang-te, the king of Khotan, submitted to the Chinese General Pantchao. Thenceforward the kingdom of Khotan became a regular dependency of China, which formed that kingdom, together with Kashghar and other Central Asian principalities, into an administrative unit under the name of the "Western Countries" and under a Chinese Governor-General,⁷ and placed Chinese Governors in Khotan and the other chief towns. Shortly afterwards, King Kanishka of India (about 78–106 A.D.) is said to have held hostages from the Chinese "tributary Princes to the west of the Yellow River," that is, from the princes

⁵ See p. 365 of the Brit. Mus. Catalogue.

⁶ The weight of the Brit. Mus. specimen, figured on p. 394 of the Catalogue, would seem to be 220 grains; for on p. xliii of the Introduction it is said "the Bactro-Chinese coin of 2 *liang* 4 *tchu* = 220 grs." There is here some confusion. The weight inscribed on the coin is 1 *liang* 4 *tchu* of the Han standard, which is equal to 2 *liang* and 8 *tchu* of the old standard; and both alike are equal to 227.48 grains (normal).

⁷ See Abel Remusat's *Histoire de la Ville de Khotan*, p. 3 and *passim*.

included in the Chinese "Governor-Generalship" of the "Western Countries."⁸ It is true that there had been some political intercourse between China and Khotan since the days of the Emperor Wuti (140–87 B.C.) of the Earlier Han dynasty, but Khotan only lost its independence in 73 A.D., when it was included in the Chinese "Governor-Generalship" of the Western Countries. The Chinese currency of Khotan cannot be placed earlier than that year. The native kings continued to reign under the Chinese supremacy, and this fact explains why the coins bear bilingual legends. It is distinctly a Chinese currency, because the standard of the coins is Chinese, inscribed in Chinese language and characters, and this fact clearly indicates Chinese supremacy. On the other hand, the reverse of the coins bears the symbols and names of the native kings, in native (Indian) characters,—a fact which indicates both that native kings still continued to reign, and that the language and characters, used by the native administration, were Indian.

The first connection of India with Khotan dates back to the time of king Açoka (264–233 B.C.). Ancient Khotanese chronicles, quoted by Chinese writers, relate that the eldest son of that king, when dwelling in Takşaçilā in the Panjāb, had had his eyes put out, and the tribal chief who had been guilty of the outrage was banished, together with his tribe, across the Himālayas. There the tribe settled and later on chose a king from among themselves. Soon afterwards they came into collision with another tribe settled to the east of them, whose king had been expelled from his own country. In the result, the western or Indian tribe was conquered, and the eastern king, now uniting both tribes under his rule, established his capital in the middle of the country, at Khotan.⁹ This must have been about 240 B.C. The eastern tribe would seem to have been the Uighurs, of the Turkī race. They gradually occupied the whole of Eastern Turkestan before 200 B.C., being pushed forward from the north-east by the Hiungnu or Huns, another Turkī tribe. The latter, in their westward movement, displaced two Turkī tribes, the Yuechi (or Yueti) and the Uighur; the former migrated to the north, the latter to the south of the Tian Shan mountains, displacing in their turn the Saka tribe which had formerly dwelled there. The Yuechi were gradually driven across the Ili and the Yaxartes. From 163 to 126 B.C., they occupied the country between the latter river and the

⁸ See Beal's *Buddhist Records of the Western World*, Vol. I, pp. 57 and 173; also *Numismatic Chronicle*, Vol. IX (1889), p. 272.

⁹ See Abel Remusat's *Histoire de la Ville de Khotan*, pp. 37, 38, and Beal's *Buddhist Records of the Western World*, Vol. II, p. 310.

Oxus, and by 26 B.C. they had extended their settlements beyond the Hindukush into Afghanistan. Here they formed a great kingdom under the two Kadphises and under Kanerkes and Hverkes from about 25 B.C. to 180 A.D. Their rule gradually comprised the whole of North-Western India in addition to Eastern Afghanistan. On their coins they used both the Greek and Indian-Kharoṣṭhī characters: the former they retained from their Greek predecessors whose official script it had been; the latter was the script of secular commerce of their Indian subjects. Co-existing with these scripts there were in use also the Indian-Brāhmī characters, favoured by the religious and learned, especially the Buddhists.

Concurrent with the great Yuechi kingdom there was in North-Western India a smaller one of another Turkī race under the kings Maues, Azes, and their successors, from about 50 B.C. to 80 A.D. It did not extend beyond the Panjāb, and the Turkī invaders who founded it, must have entered India through Kashmir and over the Karakorum passes from the direction of Khotan. Here, we have seen, the Uighur tribe, which still continues to form the main stock of the population of the whole of Eastern Turkestan,¹⁰ had gradually established itself in the second century B.C., in constant warfare with the Hiungnus and Sakas. It was no doubt the Uighurs who, similarly to the Yuechis further west, pressed forward and extended their rule into India in the first century B.C. Here they became the neighbours and rivals of the Yuechis, and here also they became acquainted with Greek and Indian culture; for, like the Yuechi Indian kings, the Uighur Indian kings Maues, Azes and their successors have both Greek and Indian-Kharoṣṭhī legends on their coins. The Uighur kingdom, which in the South, (in India), had to contend with the Yuechi, and in the North, (in Eastern Turkestan), with the Hiungnu, at last declined in power. In order to secure the assistance of the Chinese empire, its Northern portion submitted to China and consented to pass under its administration. This happened, as we have seen, in 73 A.D.¹¹ About the same time its southern portion was annexed by the Yuechi king Kanishka, who extended his rule over Kashmir up to the Karakorum (Tsung-ling) range, and took hostages from the remainder of the Uighur kingdom.¹² Under these altered conditions, the Uighur coinage in Khotan was conformed to the Chinese standard, and its obverse legend, which had hitherto been Greek, was replaced by a Chinese inscription. The reverse legend, on the other hand, continued, as hitherto, to be expressed

¹⁰ See N. Elias' *Tarikh-i-Rashidi*, p. 92.

¹¹ See Abel Remusat's *Histoire de la Ville de Khotan*, pp. 3 ff.

¹² See Beal's *Buddhist Records of the Western World*, Vol. I, pp. 56, 57.

in the official Indian language and Indian-Kharoṣṭhī characters. This explains the use of the latter amongst a Turkī population, such as that of Khotan must have been. They were the language and script of the Uighur Government, having originally been adopted in India, and surviving in Khotan after the Indian portion of the kingdom had been lost. Similarly the use of the Indian-Uighur types of the bare horse and the Bactrian camel were continued. These types are found on the coins of Maues, Azes, and their successors;¹³ and indeed, they rather point to Turkestan as their home-land.

That a species of Indian script was current in Khotan, is well known from Chinese writers. The case is not quite so clear with respect to the language of the country. Hiuen Tsiang (about 645 A.D.) relates that "the written characters and the mode of forming their sentences resemble the Indian model; the forms of the letters differ somewhat; the differences, however, are slight. The spoken language also differs from that of other countries."¹⁴ Another account says that "they have chronicles, and their characters, as well as their laws and their literature, are imitated from those of the Hindūs, with some slight alterations. This imitation has diminished their barbarism, and modified their manners and their language which (latter) differs from that of other people."¹⁵ These statements clearly indicate that the Uighur population of Khotan, originally totally unlettered and uncultured, derived the whole of their ancient culture from India; and this fact well agrees with, and is well explained by, the ancient extension of Uighur rule over North-Western India. At the same time, it is not probable that the Chinese statements about the written characters refer to the Indian-Kharoṣṭhī script. They rather indicate a modified form of Indian-Brāhmī. The Kharoṣṭhī, as seen on the Indo-Chinese coins, does not merely "resemble the Indian model," but is identical with that once current in North-Western India and Eastern Afghanistan. Hiuen Tsiang was a Buddhist monk, and on his travels he resided in Buddhist monasteries, and came in contact almost exclusively with Buddhist culture. The Indian-Brāhmī was the home-script and the peculiar script of Buddhism, and was carried by them wherever they went. It went

¹³ See British Mus. Cat., pp. 72, 89, 96, 112. On their coins, as well as on the Indo-Chinese coins, the horse is standing or walking, and is turned to the right. The horse occurs also on the coins of other kings (Euthydemus, Heliocles, Menander, etc.), but it is turned to the left, or is prancing. So also the camel is found on Menander's coins, but it is turned to the left, while on the Indo-Chinese coins it stands to the right.

¹⁴ See Beal's *Buddhist Records of the Western World*, Vol. II, p. 309.

¹⁵ See Abel Remusat's *Histoire de la Ville de Khotan*, p. 37.

with them, as we know from the Bower and Weber Manuscripts to Kuchar, and it is equally probable that it went with them to Khotan. The introduction of Buddhism into both these places may be traced back to as early a time as the first or second centuries B.C. In both places, as the Chinese note, the Indian Brāhmī developed "slight alterations,"¹⁶ known to us in Kuchar as the peculiar Central-Asian Brāhmī.¹⁷ Hiuen Tsiang, in the passage above quoted seems to distinguish between the spoken and the written language of Khotan. By the latter, which he calls "the mode of forming their sentences," and which he says "resembles the Indian model," I presume he means Sanskrit or Pāli, such as was used in Buddhist literature, and which can have been known only to a very limited class of people, the Religious and Learned. The "spoken language," which I take to have been that of the general population, must have been the Uighur Turkī, and this as Hiuen Tsiang says, differed "from that of other countries," *i.e.*, China and India. This view is confirmed by a remark of Sung-yun (518 A.D.) respecting Yarkand. Of this town he says, "their customs and spoken language are like those of the people of Khotan, but the written character in use is that of the Brāhmans,"¹⁸ *i.e.*, the Indian Brāhmī. Moreover, Fahian (400 A.D.) reports expressly with regard to the whole of Eastern Turkestan, that though the people speak different Turkī (*Hu*) dialects, "the professed disciples of Buddha among them all use Indian books and the Indian (Sanskrit) language."¹⁹ None of these Chinese Buddhist pilgrims appears to have noticed the existence of the Kharoṣṭhī script, whether in Khotan or in its Indian home-land. The only script of the Semitic class which Hiuen Tsiang noticed, he mentions in connection with the kingdom of Kesh,²⁰ and this script cannot have been the Kharoṣṭhī, though it may have been allied to it. Possibly in their time, Kharoṣṭhī had practically ceased to exist. In Khotan, at the time of the Indo-Chinese coins, it was evidently the secular official script of the native Government, though not quite exclusively so, as is shown by the Kharoṣṭhī manuscript found near that town by M. Dutreil de Rhins and containing a portion of the Buddhist Dhammapada.²¹ It does not seem probable that, after the

¹⁶ With regard to Kuchar, see Hiuen Tsiang's remark, in Beal's *Buddhist Records of the Western World*, Vol. I, p. 19.

¹⁷ See a description of it in my Report, in the *Journal, As. Soc. Beng.*, Vol. LXVI (1897), p. 242, LXII, p. 4.

¹⁸ See Beal's *Buddhist Records of the Western World*, Vol. I, p. lxxxix.

¹⁹ See *ibidem*, Vol. I, p. xxiv.

²⁰ See *ibidem*, Vol. I, p. 38.

²¹ See *Comptes Rendus de L'Académie des Inscriptions*, Vol. XXV, (1897), pp. 251 ff.

severance of the Indian connection of the Uighur kingdom of Khotan, the use of the official Kharoṣṭhī script survived for any great length of time. Its forms, as seen in the Dutreil de Rhins Manuscript and on the Indo-Chinese coins, are much alike, and both are identical with that form of it which prevailed under the Kushana (Yuechi) kings in India, that is, in the first and second centuries A.D. Though its form remained practically unchanged for a century or two longer in its home-land, it is very improbable, to judge from the parallel case of the Indian-Brāhmī, that this would have been the case in a foreign country like Khotan. It is not probable, therefore, that the Indo-Chinese coins can be placed later than the end of the second century A.D. They show, as already remarked, four, if not five, different regal names. Four or five reigns, at an average of 20 or 25 years, occupy a period of about 100 years. This brings us to, at least, the year 173 A.D., as none of the coins can have been struck before 73 A.D. The initial date is certain; the terminal date must be near the end of the second century. The period 73–200 A.D., therefore, is a safe date to give to the Indo-Chinese coins of Khotan.

Within that period, the Chinese records mention the names of four or five kings of Khotan: (1) *Kuang-te* in 73 A.D., who first submitted his country to the overlordship of the Chinese; (2) *Tang-t'sian* in 129–131 A.D., (3) *Kian*, (4) 'An-kue, son of *Kian*, who succeeded his father in 152 A.D., and (5) *Shansie* in 220–226 A.D.²² None of these names agrees with any of those on the coins; but they rather look like true Chinese names, so that it would seem that the kings bore duplicate names, native Turkī and Chinese. At that early period, as the Chinese relate, the kings of Khotan were devoted Buddhists, and as such, it may be surmised that they bore names which were the Uighur equivalents of Indian Buddhistic terms. Dharma being a common prefix of many Buddhistic names, *Gugra* might be its Uighur equivalent. A long list of ancient Khotanese royal names, all beginning with *Vijaya*, is given by Rai Sarat Chandra Das from Tibetan sources.²³ If this list can be trusted, *Gugra* might represent *Vijaya*.

II. CHINESE COINS.

My knowledge of Chinese is very small, and the only numismatic aid, available to me, is the Catalogue of Chinese Coins in the British Museum' by Dr. Terrien de Lacouperie, and an article on Chinese Coinage in the Transactions of the China Branch of the Royal Asiatic

²² See Abel Remusat's *Histoire de la Ville de Khotan*, pp. 3, 6, 8, 15, 17.

²³ See *Journal, Asiat. Soc. Beng.*, Vol. VI (1886), pp. 197, 198.

Society, Part II for 1848–1850, by C. B. Hillier. I hope that this disadvantage under which I am labouring may be accepted as a sufficient excuse for the imperfections of my descriptions of the Chinese coins in the collection.

With reference to numismatic evolution, Chinese round coins fall into three periods. In the first period, they have no inscriptions whatever. In the second period, they have a legend on the obverse, consisting at first of two symbols, placed to the right and left of the central hole, and afterwards of four, there being two additional symbols above and below the hole: the reverse is blank. In the third period, they have inscriptions both on the obverse and reverse sides, generally consisting of four symbols on each side, distributed on the four sides of the central hole. The first advance to a double-sided inscription consisted either in repeating the obverse legend on the reverse, or in placing on it one new symbol, in most cases a numeral indicative of the value of the coin. There are found occasional anticipations as well as survivals; but roughly speaking, the course of numismatic evolution appears to have been as above explained.²⁴ This is amply borne out by the coins in our collection.

In point of chronological sequence the coins of the collection also happen to fall into three distinct periods: ancient coins of the 1st to the 3rd centuries A.D., mediæval coins of the 7th to the 13th centuries, mostly of the two dynasties of the T'ang (618–907 A.D.) and the Sung (960–1279 A.D.), and modern coins of the 18th and 19th centuries, issues of the ruling Manchu dynasty. The circumstance of the two large gaps of several centuries each is curious, but perhaps altogether accidental. The presence of the numerous coins of the T'ang and Sung dynasties is probably accounted for by the fact that during the periods of their rule, as shown by the Chinese records,²⁵ an exceptionally lively intercourse was kept up between China and Khotan.

The total number of Chinese coins in the collection is 148. Among these there are 43 ancient, 77 mediæval, and 28 modern coins. All the ancient and many of the mediæval coins were found in the desert around Khotan. The modern ones came from Khotan itself. They all formed part of M. 2, 3, 4, 6, 9; most of the ancient ones belong to M. 2.

²⁴ See *British Museum Catalogue*, pp. xxvii and 319. Examples of repetition are *ibidem*, Nos. 1727–1731, 1786–1790, 1877, 1880. Examples of the addition of numerals are Nos. 1767–1778, 1807–1814, of other symbols, Nos. 1782, 1815, 1816, 1818, 1820, 429–436. Exceptional anticipations of a double-sided legend are Nos. 1752, 1753. Examples of survivals of a two-symbol legend are Nos. 426–438, 1852–1855.

²⁵ See Abel Remusat's *Histoire de la Ville de Khotan*, pp. 67 ff.

All the ancient coins are of copper, except one which appears to be of lead. All the mediæval and modern coins are of a species of bronze or brass.

(a) *Ancient Coins*.

(1) Coins without legends. (Plate II, figs. 1a-d.)

These coins number 27. They are of three different sizes :

large,	11 specimens,	size 0.7-0.9'',	weight 21.5-31 grs.
middle,	11	„ „ 0.66-0.75'',	„ 11.5-15.5 grs.
small,	5	„ „ 0.5'',	„ 5-8 grs.

Two good specimens are shown in the British Museum Catalogue, large, No. 180 (p. 340), and middle, No. 407 (p. 399), weighing 38 and 19 grains respectively. Most of the specimens in our collection are not in an equally good condition. Their weight is much lighter, their shape is very irregular (some nearly square), and their rim in many cases is very narrow (down to $\frac{1}{2}$ of an inch). They have clearly been subjected to much clipping.

This class of coins appears to have been current under both Han dynasties, the Former or Western as well as the Later or Eastern. Those of our collection must belong to the later period, *i.e.*, 25-220 A.D., as Khotan came into closer contact with China only from about the middle of the first century A.D.

(2) Coins with an obverse legend of two symbols. (Pl. II, 2, 3). The coins of this class number 16. They consist of the following :

(a) With the legend *Wu-Tchu* or 'Five Tchus'; 9 specimens; five well preserved (Pl. II, fig. 2), weighing 33-38 grains and measuring 1 inch; four considerably rubbed and clipped, weighing 15-25.5 grains and measuring 0.75-1.0 inches. Compare *British Museum Catalogue*, Nos. 315, 316, 398-403 (pp. 361, 396).

(b) With the legend *Ho-tsiuen* or 'Spring of goods'; 2 specimens, weighing 34 and 20 grains, and measuring 0.875 and 0.8 inches; too indifferently preserved to be figured, but like *British Mus. Cat.*, No. 365 ff. (p. 334).

(c) With unread legend, see Plate II, fig. 3; apparently lead; one specimen; weight 78.5 grs.; size 1.0625''.

The *Wu-tchu* currency was introduced by the Han dynasty, and the *Ho-tsiuen* currency, by the usurper Sin Wang Mang (9-22 A.D.). Both currencies continued into the period of the Later Han dynasty, 25-220 A.D., and the specimens of our collection must be ascribed to that period.

(b) *Mediæval Coins.*

(1) Coins with an obverse legend of four symbols.

(Pl. II, 4–18 and Pl. III, 6, 7.)

The coins of this class number 76. They consist of the following currencies :—

(a) With the legend *K'ai-yuen-tung-pao*, or 'Current money of the K'ai-yuen period.' This period comprised the years 713–741 A.D., under the Emperor Yuen-tsung of the T'ang dynasty.²⁶ There are two coins of this period; weight 49 and 50 grs.; size 1". Plate II, 9.

(b) With the legend *K'ien-yuen-tchung-pao*, or 'Current money of the K'ien-yuen period.' This period comprised the years 758–763 A.D., under the Emperor Su-tsung of the T'ang dynasty.²⁷ Of this period there is a very large number of coins in the collection; altogether 45. They are of three different sizes:

large, 12 specimens; size 1.0625"; weight 71–136 grs. (Pl. II, 7).

middle, 3 " ; " 1"; " 48.5–49.5 grs. (Pl. II, 6).

small, 30 " ; " 0.875"; " 23–41.5 grs. (Pl. II, 5).

Many of these coins were in M. 3; some in M. 2.

(c) With the legend *Ta-li-yuen-pao*, or 'Principal money of the Ta-li period.' This period comprised the years 763–780 A.D., under the Emperor Tai-tsung II of the T'ang dynasty. There are ten coins of this period, of three different sizes :—

large, 4 specimens; size 0.9375"; weight 45.5–59.5 grs. (Pl. II, 4).

middle, 5 " ; " 0.875"; " 37–51 grs.

small, 1 " ; " 0.75"; " 36 grs.

These belong to M. 2, M. 4, M. 6. A Chinese manuscript petition dated in this period is in the collection of MSS.

(d) With the legend *Che-tao-yuen-pao* or 'Principal money of the Che-tao period.' This period apparently comprised the years 984–998 A.D., under the Emperor Tai-tsung (976–998 A.D.) of the Sung dynasty.²⁸ There is one coin of this period; legend in "running hand"; weight 58 grs., size 1". Figured by Hillier, No. 124 (p. 63). From M. 2.

(e) With the legend *King-t'i-yuen-pao*, or 'Principal money of the King-t'i period.' This period apparently comprised the years 998–1008 A.D., under the Emperor Chin-tsung I (998–1023 A.D.) of the Sung dynasty.²⁹ There is one coin of this period; weight 36 grs., size 0.9375". Plate II, 16; and in Hillier, No. 126 (p. 63). From M. 2.

²⁶ See Abel Remusat's *Histoire de la Ville de Khotan*, p. 70.

²⁷ See *ibidem*, p. 70.

²⁸ Compare *ibidem*, p. 88. The preceding period was 976–983 A.D.

²⁹ Compare *ibidem*, p. 86. The following period was 1008–1116 A.D.

(f) With the legend *T'ien-çing-tung-pao*, or 'Current money of the T'ien-çing period.' This period comprised the years 1023–1034 A.D., under the Emperor Tin-tsung of the Sung dynasty.³⁰ There is one coin of this period; weight 55 grs.; size 1". Plate II, 18.

(g) With the legend *Kia-yeu-tung-pao*, or 'Current money of the Kia-yeu period.' This period comprised the years 1056–1064 A.D., under the Emperor Jin-tsung of the Sung dynasty.³¹ There are two coins of this period; weight 47.5 and 55 grs.; size 1". Plate II, 15.

(h) With the legend *Che-ping-yuen-pao* or 'Principal money of the Che-ping period.' This period comprised the years 1064–1068 A.D., under the Emperor Ying-tsung of the Sung dynasty.³² There is one coin of this period; weight 52.5 grs., size 1". Plate II, fig. 8; and in Hillier No. 138 (p. 68). From M. 2.

(i) With the legend *Yuen-fung-tung-pao* or 'Current money of the Yuen-fung period.' This period comprised the years 1078–1085 A.D., under the Emperor Chin (Shin)-tsung II of the Sung dynasty.³³ There are two coins of this period; one with the legend in "running hand," the other, in ordinary script; weights 35 and 32.5 grs., size 1" and 0.9375". Plate II, 12, and Hillier No. 140, p. 71. From M. 2.

(k) With the legend *Yuen-yu-tung-pao* or 'Current money of the Yuen-yu period.' This period comprised the years 1086–1093 A.D., under the Emperor Che-tsung of the Sung dynasty.³⁴ There are three coins of this period; two with the legend in "running hand," and one with it in "seal-characters." Weight of the former, 60.5 and 39 grs.; size 0.9375" and 0.875"; Plate II, fig. 13. Weight of the latter, 68.5 grs.; size 0.9375"; in Hillier, the 2nd under No. 141 (p. 71). From M. 2 and M. 6.

(l) With the legend *Chao-çing-yuen-pao* or 'Principal money of the Chao-çing period.' This period comprised the years 1094–1097 A.D., under the Emperor Che-tsung of the Sung dynasty.³⁵ There are two coins of this period, one with the legend in "running hand," the other with it in "seal-characters." Weight, 54 and 51 grs.; size 1" and 0.9375" respectively. Plate II, fig. 17 and fig. 14; in Hillier, No. 142 (p. 72). From M. 2.

(m) With the legend *Tsung-ning-tchung-pao* or 'Weight-money of the Tsung-ning period.' This period comprised the years 1101–

³⁰ See *ibidem*, p. 90.

³¹ See *ibidem*, p. 91.

³² Compare *ibidem*, p. 91.

³³ Compare *ib.*, pp. 92, 95, 97. The preceding period was *Hi-ning* 1068–1077 A.D.

³⁴ See *ibidem*, p. 97.

³⁵ See *ibidem*, p. 98.

1106 A.D., under the Emperor Hwei-tsung (1101–1126 A.D.) of the Sung dynasty.³⁶ There is one coin of this period; weight 176 grs.; size 1.416". Plate III, 7 (inverted), and Hillier No. 145 (p. 74). From M. 9.

(n) With the legend *Kuang-ting-yuen-pao* or 'Principal money of the Kuang-ting period.' This period was current under Shin-tsung in the State Hear, apparently in the 13th century; see Hillier, No. 194 (p. 104). There is one coin of this period; weight 58.5 grs.; size 1". Plate II, fig. 10. From M. 2.

(o) With the legend *King-hing-tung-pao* or 'Current money of the King-hing period.' The exact date of this period appears to be unknown; see Hillier, No. 308 (p. 154); it should be somewhere in the time of the T'ang or Sung dynasties. There is one coin of this period; weight 41.5 grns.; size 0.9375". Plate III, No. 6. From M. 2.

(p) With unread legends. There are three coins of this kind, which I cannot identify in Hillier's article. They all have the term *tung-pao* which refers them to the time of the T'ang or Sung dynasties. One of them is shown on Plate II, fig. 11. Weights 39.5, 51.5, 58 grs.; size 0.9375–1". From M. 2.

(2) Coins with obverse and reverse legends. (Pl. II, fig. 19).

There is only one coin of this class, which I have not been able to identify in Hillier's article. I read the obverse legend *Li-yung-tung-pao* or 'Current money of the Li-yung period.' The reverse has only one symbol *chen* or 'a bazar.' In Hillier's article I find this symbol only on the reverses of certain coins of Yung-ming-wang and Chang-hin-chung (Nos. 254 and 259, pp. 136 and 139), who are said to be princes at the close of the Ming dynasty, *i.e.*, 1644 A.D. Weight 55 grs., size 0.9375".

(c) Modern Coins.

The total number of modern coins is 28. They fall into the following classes:

(1) Coins with Chinese legends on both sides. Of these there are altogether 24, of the following reigns:—

(a) With the obverse legend *Kang-hi-tung-pao* or 'Current money of the Emperor Kang-hi,' who reigned from 1661–1722 A.D. Of his reign there are two coins, with the same reverse legend of two words in Manchu characters *pao tsiuen* or 'source of money,' *i.e.*, mint Peking. Weight 70 and 50 grs.; size 1.0625" and 0.875". Plate II, 20.

(b) With the obverse legend *K'ien-lung-tung-pao*, or 'Current money of the Emperor K'ien-lung,' who reigned 1735–1796 A.D. Of

³⁶ Compare *ibidem*, p. 99. The following period was Tai-Kuen 1107–1111 A.D.

his reign there are 14 coins. The reverse has varying Manchu legends of two words. Weight 44–70 grs., size 0·875–1". Plate II, 21.

(c) With the obverse legend *Hien-fung-tchung-pao*, i.e., 'Weight-money of the Emperor Hien-fung,' or *Hien-fung-yuen-pao*, i.e., 'Principal money of Hien-fung,' who reigned from 1850–1861 A.D. Of his reign there are eight coins. One is of bronze, very large, and has a tri-lingual reverse legend, in Chinese (above and below the hole) *tung* 100 or 'value 100 cash,' in Persian (to the right) *ياركند* or (mint) 'Yār-kand,' and in Manchu (to the left), see Plate II, 30. The other seven coins are of brass, of two different sizes, and with a bi-lingual reverse legend. The larger one (Plate III, 5) has in Chinese (above and below) *tung* 15 or 'value 15 cash,' the smaller ones have *tung* 10 or 'value 10 cash.' In addition all seven coins have a Manchu legend (right and left). (Plate II, 22).

Very large,	1	specimen	;	size	2·0826"	;	weight	576	grs.
large,	1	"	;	"	1·75"	;	"	351	grs.
small,	6	"	;	"	1"	;	"	76–118	grs.

(2) Coins with Persian legends on both sides. There is one coin of this kind, of copper. Plate II, No. 23. It is made in the Chinese fashion, but is probably a coin struck during one of the more recent periods of Muhammadan independence of Kashghar. The legend is not fully read.

Obverse.

Reverse.

سید غازی راشیدی خان

ضرب (دار السلطنة) كوجا

The reverse (over *saltanat*) apparently bears the date 1283 H., nearly obliterated, which would be 1866–1867 A.D., or the second year of Yaqūb Beg's revolt,³⁷ and with which the number 2 on the obverse would agree. Kūjā, which is quite distinct, may be intended for *kūchā* (Kuchar), but the words in brackets are uncertain; and I am unable, with the means at my command, to identify the ruler's name recorded on the obverse. Weight 48 grs.; size 1 inch. From M. 2.

(3) Coins or Tokens with a Chinese legend on one side only. There are three of these pieces which are perhaps rather tokens than coins. I can obtain no information on them. They are shown on Plate II, fig. 25. They first bears the symbol for *tsien* or 1000; the two other symbols I do not know. They are of bronze, and weigh 89·5, 80·5 and 108·5 grs.; size 0·83". From M. 2.

³⁷ See Dr. Bellew in Sir T. D. Forsyth's *Report of a Mission to Yarkand in 1837*, pp. 208-213.

III. SCYTHO-BACTRIAN.

With the exception of two doubtful specimens, probably all the coins of this class, numbering 36, have come from Western Turkestan (Samarkand, Tashkend, etc.). They belong to G. 4, and were briefly reported on by me in my letter to the Under-Secretary, Government of India, Department of Revenue and Agriculture, dated the 20th November, 1897. The two exceptions belonged either to M. 2 or M. 6, and come from one of the buried sites lying to the north of Khotan.

(a) *Imitations of Bactrian Coins.*

There are seven of these; all silver tetradrachms. They imitate the coins of Euthydemus and Heliocles. The former reigned in Bactria about 210–190 B.C.; the latter, who appears to have belonged to a rival family, about 160–120 B.C. During the reign of the former, Saka tribes occupied the Northern provinces of the Bactrian empire between the Oxus and Yaxartes. During the reign of the latter, the Sakas, being driven out by Kushan (or Yue-chi) tribes, occupied Bactria south of the Oxus.³⁸ Their chieftains imitated the coins of their contemporary Bactrian rulers. These coins can be easily recognized by their degradation, both in point of design and of weight.

The best of the seven coins are two in imitation of Heliocles, of his well-known type: Bust of King on obverse, and Standing Zeus on reverse, as in the British Museum Catalogue, plate vii, fig. 2. One, which weighs 231 grains (full weight 264), measures 1.25", and is fairly good in design (with ringlet for omikron), though much worn, may possibly be a genuine coin of Heliocles. It has the monogram of Brit. Mus. Cat., No. 4 (p. 21). The other weighs only 219 grains (size 1.25"), and, as the semi-barbarous reverse shows, is clearly a Saka imitation: but the curiosity of it is, that while it has an imitated Heliocles reverse, it has retained an apparently genuine Eukratides obverse; see Plate III, 10. Eukratides (c. 190–160 B.C.) was the predecessor, and perhaps father, of Heliocles. The imitated Heliocles reverse is very fairly done, it has the full Greek legend, but with a dot for omikron, and a rather rude figure of Zeus. Its monogram is . Both this and the first-mentioned coin must be early imitations, and may be referred to about 150 B.C.

The remaining five coins are imitations of Euthydemus, of his well-known type with Head of King on obverse, and Sitting Heracle

³⁸ See the outlines of Bactrian history in the Introduction to the British Museum Catalogue, pp. xviii, ff.

on reverse, with club resting on his knee. One of them, which is the heaviest, weighing 170 grains and measuring 1", has the king's portrait as shown in *Brit. Mus. Cat.*, pl. ii, fig. 1-4. It had also an entirely Greek legend, which, however, is almost totally obliterated. The other four coins, which only weigh from 155 to 144 grains, show the king's face as portrayed in *Brit. Mus. Cat.*, pl. i, fig. 11, (also *Ariana Antiqua*, pl. i, figs. 2-4, and Rapson's *Indian Coins*, pl. i, fig. 18, in the *Indo-Aryan Encyclopedia*). Both types of face, however, are very fairly imitated, see Plate I, Nos. 2 and 3. One of the four coins, which weighs 144 grains (size 1"), had an entirely Greek legend, now badly effaced; but sufficient traces remain to show that it had the name of Heliokles struck over that of Euthydemus. The two names were not struck accurately in the same line, consequently M (of Euthydemus) is still seen slightly projecting over the line of Heliokles, of which latter name K is fully, and ΛI partially recognizable; as No. 8.

shown in the annexed woodcut; see Plate III, 11.

The other three coins are bilingual, having the king's name in native Bactrian letters, while the



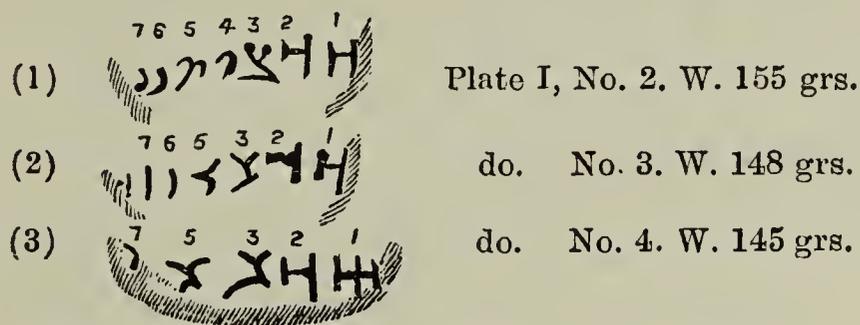
title in Greek characters is seen in its usual place to the right, or behind the back, of the Sitting Heracles; see Plate I, Nos. 2-4. Of the Greek title ΒΑΣΙΛΕΥΣ only the three letters ΣΙΛ or ΣΙΛΜ (i.e., with inverted Λ) together with traces of Α before and Ε after them are clearly legible.³⁹ Coins of this description, that is, with the title to the right and the name in Bactrian letters to the left of Heracles, appear to have been found previously. Two such coins, from the collection of General Fox (if I understand the account correctly) are described by Mr. Thomas in his edition of Prinsep's *Indian Antiquities*, vol. I, p. 32. But, so far as I know, none of them has ever been figured. Similar coins, but with the Greek and Bactrian legends transposed, that is, the title in Bactrian and the name (Euthydemus) in Greek, have been published. One, in rather good preservation, has been figured by Sir A. Cunningham in the *Numismatic Chronicle*, vol. IX (1889), pl. xiii, (also in Rapson's *Indian Coins*, pl. i, 19). Another series of similar coins has the whole legend in Bactrian characters, see *Numismatic Chronicle*, vol. IX., pl. xiii, 6, also *Ariana Antiqua*, pl. i, 9, 10, *Indian Antiquities*, pl. ii, 6. It is probable that, as Sir A. Cunningham says (*Num. Chron.*, vol. IX, p. 307), the oldest imitations are those with Greek legends only, next come those with mixed legends of rude Greek and Bactrian letters, the latest are those with Bactrian characters only. In the second class,

³⁹ On the photographic plates they are not so distinct as on the original.

I suppose, those coins which preserve the Greek fashion of arranging the legends, and show the title on the right in Greek, and the name on the left in Bactrian, may be considered to be older than those which show the mixed legends in the reversed position, *i.e.*, the name in Greek on the left, and a Bactrian legend on the right, the latter also being a name. Accordingly the bilingual coins of the present series may be referred to about 130 B.C. It would also seem, if Dr. Gardner's theory of the change of standard is correct (see *Brit. Mus. Cat.*, *Introd.*, pp. lxxvii, lxxviii), that these coins are didrachms of the Persian standard (full weight 160-170 grains), such as began to be minted in Heliccles' reign.

Seeing that the Bactrian legend ⁴⁰ on our coins takes the place of the Greek name, it seems reasonable to assume that, like the latter, it runs parallel to the Greek title and must be read from the outside of the coin. This assumption is certainly supported by the general appearance of the characters, which, after the Semitic fashion must be read from the right to the left. They are shown in the subjoined woodcut.

No. 9.



The third, fourth and fifth letters of No 1 legend have a distinct resemblance to the Kharōṣṭhī letters *ja*, *a* and *ka*; and at first I was disposed to take the second letter as a crude Kharōṣṭhī *ra*, and to read the whole as a mutilation of (*ati*)*raja Aka(thukleyasa)*. But the

⁴⁰ In order to prevent any misunderstanding I may explain that I use the term Bactrian in the definite sense of referring to Bactria *proper*, and the immediately adjacent northern provinces of what was once the Bactrian Kingdom. What I wish to suggest (the suggestion only to be taken for what it may be worth) is that corresponding to the modified Aramaean script current to the South of the Paropamisus and known as Kharōṣṭhī, there may have been another modified and allied Aramaean script current to the north of that range, of which the letters on the coins in question may be witnesses. This suggestion refers only to the script whether the language hidden in the legends of the coins was a species of old Turkī or old Iranian is a point on which I hazard no opinion. For a similar suggestion, if I understand it rightly, see Isaac Taylor's *The Alphabet*, Vol II, pp. 232, 233.

remaining signs do not suggest Kharōṣṭhī letters. The fifth letter of Nos. 2 and 3 suggests the Kharōṣṭhī \bar{e} ; but on the whole the three legends suggest themselves as identical; for the first three letters in all are clearly the same; so are most probably the sixth and seventh; and the fifth letter of Nos. 2 and 3 may be only a badly drawn form of the corresponding letter in No. 1. The only apparent difference between the three legends is, that the fourth letter of No. 1 is wanting in Nos. 2 and 3. I am not able to decipher the legend; but considering the juxtaposition with the other coins of Euthydemus and Eukratides which bear the name of Heliocles, I would like to suggest that the Bactrian legend might also contain that name. The alphabet current in Bactria must have been one of the very early modifications of the Aramaean, similar to the ancient Pahlavī and Kharōṣṭhī. The first and fifth letters are very like the Pahlavī *h* and the Kharōṣṭhī *k* respectively. The second letter resembles the Kharōṣṭhī *l*. The third and fourth letters resemble the Pahlavī *aleph* and *vau* respectively, and together might have been used to express the vowel *o*. In Nos. 2 and 3 the fourth character is omitted; and the third might also be taken to represent the Aramaean *'ayin* and to express the vowel *o*. Anyhow the initial four or five characters may easily be interpreted to represent *h-l-o-k*, the initial portion of the name *Heliok(les)*. It is more difficult to fit-in the remainder, unless we may assume that the name was pronounced with *r* instead of *l*, as in its Indian form *Heliyakreya*. In that case the sixth letter is *r*, in its form closely resembling the corresponding Pahlavī and Kharōṣṭhī characters. The seventh letter appears to be mutilated, and there may have been an eighth; but I do not know what the genitive inflection of the local Bactrian or Scythian dialect may have been in those days. Thus the characters may represent the letters *h-l-o-k-r*, which would well enough make up the name of Heliokles.

(b) *Coins of Hyrkodes.*

There are twenty-six coins of Hyrkodes, about 110 B.C., silver obols; mostly of the two well-known types, with Head of King on obverse, and either Standing Figure (17 specimens), or Head of Horse (7 spec.) on reverse, as shown in Brit. Mus. Cat., pl. xxiv, 10 (10 spec.), *ibidem*, pl. xxiv, 11 (7 spec.), and *ibid.*, pl. xxiv, 12 (7 spec.). But there are two obols, one being a new variety of the well-known type, the other an entirely new type. The new variety (see Plate III, No. 8) shows on the reverse the Standing Figure holding a spear in his left hand, while the usual variety shows the spear in his right hand. Weight 13 grs.; size 0.5". The new type (see Plate III, No. 9) shows the usual Head of King on the obverse, but the reverse has a standing figure to the

right, apparently Nike standing on a scroll (cloud?) with traces of a Greek legend. The King's head is distinctive for this coin. Size 0·5625". Weight 17 grs.

(c) *Coin of Azes.*

There is one coin of Azes, c. 30 B.C., silver; nearly the entire legends of both sides clipped away; of the well-known type with mounted King on obverse, and Zeus holding Nike on reverse; apparently in every respect (incl. of monograms) the same as Brit. Mus. Cat., No. 32, p. 75. Weight 36 grs., size 0·5625".

(d) *Uncertain Coins.*

These are two copper coins, from the neighbourhood of Khotan; apparently Indo-Bactrian, but too much worn to permit of identification. One is a small round coin, measuring $\frac{1}{2}$ inch, weighing 18·5 grs., and showing on one side traces of a bull's head facing (?), within an irregular square, enclosed within a marginal circle of dots, without any legend: the other side is entirely indistinguishable. The only, hitherto known, Indo-Bactrian coins with a bull's head facing, so far as I know, are two square copper coins of Menander, in Brit. Mus. Cat., No. 66, p. 49 and No. 4, p. 169 (pls. xii, 5 and xxxi, 10). The other is a small, apparently square coin, measuring $\frac{5}{8}$ of an inch, weighing 11 grs., and showing on one side traces of a conventional stūpa (?) surrounded by an illegible legend: the other side is quite indistinguishable. The only, hitherto known, coin with a stūpa, I believe, is a square copper one of Agathocles, in Brit. Mus. Cat., No. 15, p. 12 (pl. iv, 10).

IV. INDO-SCYTHIAN COINS.

The coins of this class number 10, and belong to two distinct periods, an earlier from about 50–130 A.D., and a later from about 490–570 A.D.

(a) *Early.*

These coins, numbering 9, were found in the collections M. 2, M. 3, M. 6, G. 10, and T. 1. They came from the Khotan country, and their condition shows that they have been dug out from ancient sites.

(1) Kadphises II, c. 50 A.D., two coins, copper; obv. and rev. designs just discernible, legends quite obliterated; type (obv. King Standing; rev. Çiva and Bull) as shown in British Museum Catalogue, pl. xxv, No. 12. Size 1·0". Weight 240, 5 and 181·5 grs.

(2) Kanerkes, c. 78–110 A.D., six coins, copper, of two different sizes; all in very poor condition.

(a) four coins; obv. King standing to right, rev. figure standing to right, its posture resembling MIOPO or MAO or AΘPO; there are only faint traces recognizable; on one obverse also traces of the Greek legend. Two weigh 54 grs., one 64, and one 46 grs., but a piece of the last is broken off its edge. Size of all, 0·7".

(b) two coins; size 0·5"; weight 31·5 and 20·5; one reverse shows figure and legend MAO; the other shows traces, apparently of OADO (figure stepping to right, with both arms uplifted).

(3) Hoerkes, c. 110–130 A.D., one coin, copper, in poor condition; size 0·875"; weight 78·0 grs., obv. King standing to right; rev. faint traces of Çiva and Bull to left.

(b) *Late*.

(1) Toramāṇa, c. 495–510 A.D., one coin, copper, indifferent condition. See Cunningham's *Coins of Mediæval India*, p. 42, pl. iii, 1, 2. Size 1·0". Weight 83·0 grs.

V. SASSANIAN COINS.

(c. 458–484 A.D.).

There are seven (or six) of these, all apparently of Firūz II (458–484 A.D.) Plate I, Nos. 5 and 19. They belong to M. 2. They are of some mixed metal, and inextricably baked together in two clumps, one consisting of three and the other, apparently of four coins, weighing 192·5 and 205·6 grs. respectively, and measuring 1·125".

VI. MEDIÆVAL HINDU COINS.

(c. 900–1100 A.D.).

These coins number 8, and belong to the following two classes,

(a) *Mahārājas of Kashmir*.

The Kashmir coins number 6. They belong to M. 6, and were procured from Khotan, probably found in its Bazars, and not in sand-buried sites. They are similarly still found in Kashmir and India. There has always been commercial intercourse between Khotan and Kashmir.

(1) A very early coin, but unknown. No legend on obverse, one akṣara, illegible, on reverse.

(2) Sugandha, c. 924–926 A.D., one coin, copper. As in *Journal, As. Soc. Beng.*, vol. XLVIII (1879), p. 281, pl. xi, No. 4.

(3) Dikṣēma Gupta, c. 971–979 A.D., one coin, copper. As in *ibid.*, pl. xi, No. 6.

(4) Diddā, c. 1001–1024 A.D., one coin, copper. As in *ibid.*, pl. xi, No. 11.

(5) Harṣa, c. 1062–1072 A.D., two coins, copper. As in *ibid.*, pl. xii, No. 15.

(b) *Brāhman Kings of Kabul.*

Sāmanta Deva, about 926–940 A.D.; 2 coins, silver; of the so-called “Bull and Horseman” type, as in Prinsep’s *Indian Antiquities* (ed. Thomas), Vol. I, Plate XXV, 3, 4, 5; weight 46 and 44 grs.; size 0·7 and 0·625”. From G. 4.

VII. MÆDIEVAL MUHAMMADAN COINS.

(c. 800–1585 A.D.).

The total of these coins is 127. Many of them, as will be noticed under the several coins, belong to G. 4, and were obtained in Western Turkestan. Of the others, belonging to M. 2, M. 6, many were found in the Takla Makan desert; but it is probable that the more modern ones were procured in Khotan itself and its bazars.

These coins belong to very different classes and ages. In the following list they are arranged in chronological order.

(a) ‘*Abbāsī Khalīfahs.*

Ar-Rashīd; 1 coin, silver, like *British Museum Catalogue*, Vol. I, Plate V, No. 224 (p. 83); with a loop for suspension; mint Madinat-*l-Islām*, date 192 H. (=807 A.D.): weight 47·5 grs., size 0·83”. Belongs to G. 4.

(b) *Khāns of Turkīstān.*

(1) Yilik *Khān*; 3 coins, silver, like Br. Mus. Cat., Vol. II, Plate V, No. 433 (p. 121); two of mint Samarqand,⁴¹ dates 397 and 39[8] H, (=1006 and 1007 A.D.), weight 35·5 and 42 grs., size 0·9375” and 1·03125”; one of mint Sarraqustāh, date 394 H. (=1003 A.D.) weight 38 grs., size 0·9375”, see Plate I, fig. 21. The latter as well as one of the Samarqand coins have on the reverse area الله above and بهال below the central legend, but nothing corresponding on the obverse, while the other Samarqand coin has الله and نصر on the reverse and بلق or بلو on the obverse. From M. 2.

Yilik *Khān*, a chief of the Uighurs, is also known as Satūq Bughrā *Khān*. He lived from 333–429 H. (=944–1037 A.D.), to the age of 96 years. He was the founder of a very extensive, but short-lived empire of the Uighurs, with a capital at Kāshghar. See Dr. Bellew in Sir T. D. Forsyth’s *Report of a Mission to Yarkand in 1873*, pp. 125,

⁴¹ On one of them apparently spelled *Samarkand*.

126 (also 121, 130), and Shaw's *Grammar of the Language of Eastern Turkistān*, in the *Journal of the Asiatic Society of Bengal* for 1877, p. 334.

(2) Muḥammad Arslān Khān; 14 coins; all copper; not in the *British Museum Catalogue*; date and perhaps mint were in the marginal legend, which is almost entirely clipped off in all specimens. They are from M. 2, M. 3, M. 9 and G. 10. There are three varieties, as follows:—

First Variety. (Plates I, 22 and III, 15).

Six coins. Weight 105·5–62·5; size 0·9".

Obverse.	Reverse.
Single-lined area.	Single-lined area.
لا اله الا الله وحده لا شريك له	بالله ⁴² المستنجد ارسلان خا محمد ن

Both margins cut away.

Second Variety.

Three coins. Weight 81–92·5 grs.; size 0·9".

Obverse.	Reverse.
Single-lined area.	Single-lined area.
لا اله الا الله محمد رسول الله	بالله المستنجد ارسلان خا محمد ن

Margins cut away; but in one case *سنة* still visible.

Third Variety. (Plate I, 24).

Five coins. Weight 116·5–71·5 grs., size 0·9".

Obverse.	Reverse.
Area within two single-lined circles, with dots between. Legend as in the first variety.	Area do. بالله المستنجد محمد ارسلان خان ن
No marginal legends.	

⁴² In most cases spelled بالله.

Muhammad Arslān Khān was a son of 'Ālā Nūr Khānim, a daughter of Satūq Bughrā (or Yilik) Khān and wife of Toq Būbā Khān; he succeeded in or about 441 H. (=1049 A.D.) his uncles Ḥasan Bughrā, Ḥusain Bughrā, and Yūsuf Qādir who reigned, in the aggregate, twelve years. Both Ḥasan and Ḥusain, as well as Muhammad Arslān's half-brother Sayyid 'Āli Arslān Khān were "martyred" in battle against the "infidel" Buddhists of Khotan. See Bellew, *ibidem*, pp. 126-129 and Shaw, *ibidem*, pp. 334, 335, 339. The term *Al-mustanjid-billah* means 'Seeker of help from God.'

(c) *Ghorī Sultāns.*

Muhammad bin Sām; 2 coins; mixed silver; like *British Museum Catalogue* (Sultāns of Delhi), Plate I, No. 12, (p. 9), also No. 10 in Thomas' *Chronicles of the Pathan Kings of Delhi*; of the "Bull and Horseman" type; date *circa* 1195 A.D.; weight 45.5 and 53 grs., size 0.625". From G. 4.

(d) *Urtuqīs of Māridīn.*

'Alāu-d-dīn Kaiqobād; 1 coin, copper; like *British Museum Catalogue*, Vol. III, Plate IX, No. 474 (p. 169, under Nāşiru d-dīn's coins); mint lost, date 630 H. (=1232 A.D.) with سنه ثلاثين on the left of the central legend of reverse; weight 135.5 grs., size 1.16". Plate I, fig. 20. M. 2 (?).

This species of coin seems to have been imitated in making ornamental plaques, and guards for binding block-prints; see below General Remarks on Block-prints and Plate IV, figs. 2 and 3.

(e) *Khāns of the Golden Horde.*

(1) Jānī Beg Khān; 2 coins, silver; like Br. Mus. Cat., Vol. VI, Plate VII, No. 388 (p. 133); mint Khwārizm, date 743 H. (=1342 A.D.); weight 28.5 grs., size 0.6". From G. 4.

(2) Bardī Beg Khān; 1 coin, silver; like *ibidem*, No. 443 (p. 146) mint Khwārizm, date 760 H. (=1358 A.D.); weight 30.5 grs., size 0.6". Plate I, fig. 29.

(f) *House of Tīmūr.*

(1) Shāh Rukh; 1 coin, silver; similar to Br. Mus. Cat., Vol. VII, Plate II, No. 61 (p. 24), but adds تعلی at beginning of third line, as in No. 80 (p. 29); mint and date lost (reign 1404-1447 A.D.); weight 78 grs.; size 0.875". Plate II, fig. 27. From G. 4.

(2) Sultān Aḥmad (1467-1493 A.D.); 1 coin, silver; the same as *ibidem*, No. 61 (p. 24) of Shāh Rukh, but counter-struck with a

six-foil die of Sultān Aḥmad, as in *ibidem*, No. 117 (p. 42); mint obliterated by counter-struck die, date 828 H. (=1424 A.D.); weight 77·5 grs., size 0·875". Plate I, fig. 25. From G. 4.

(g) *Sultāns of Kashmir*.

(1) Zainu-l-'Abidīn, 1417–1467 A.D., one coin, copper. Like *Journal, As. Soc. Beng.*, Vol. XLVIII (1879), p. 284, pl. xiii, No. 2.

(2) Ḥaidar Shāh, 1467–1489 A.D., one coin, copper; date illegible. Like *ibidem*, pl. xiii, No. 5.

(3) Ḥasan Shāh, 1469–1481 A.D., one coin, copper; double-struck on a coin of Ḥaidar Shāh; date illegible.

(4) Muḥammad Shāh, 1481–1537 A.D.; two coins, copper; dates illegible. Like *ibid.*, pl. xiii, No. 7.

(5) Fath Shāh, 1483–1520 A.D., two coins, copper; dates illegible; one shows تسعين 90 (between 919 and 926 H. or 1513 and 1520 A.D.) Like *ibid.*, pl. xiii, No. 8.

(h) *Unidentified*.

(1) Seven coins, copper; not in *British Museum Catalogue*; mint Kāshghar, date 950 H. in words (=1543 A. D.); weight 80·5–123 grs.; size 0·9375–1·2". From M. 2. Plate II, fig. 26a–d.

Obverse.	Reverse.
Single-lined large circular area, within circle of dots.	Small central square, with semicircles upon the four sides.
فى التاريخ سنه خمسين تسعمائة	In square either كاشغر alone (26d) or with another unread word (26e). ضرب - عدل - (?) - ول - (?) - نس

Two of the coins show a square counter-struck die (fig. 26d), with كاشغر on it.

The two words after 'adl probably contain a name which I am unable to identify. At the time of the date of the coin several dynasties were contending for the possession of Kāshghar, e.g., the Bukhāra rulers, the Mongol Khāns and the Doughlat Amīrs.

(2) Sulaimān Khaqān (?); 52 coins, copper; not in the *British Museum Catalogue*; with neither mint nor date; weight 26–116 grs., average 60 grs.; size 1–1·4". From M. 2, M. 3, M. 4, M. 6, G. 5, G. 7, G. 10. Two varieties, as follows:

First Variety.

37 coins. Plate I, figs. 32–35.

Obverse.

Within two concentric circles
with dots between them.

لا اله الا
الله وحده
لا شريك له
محمد رسول
الله

Reverse.

Octagonal area within a
circle, with *fleur de lys*
in the segments.

الله (sic)
المستعصم
سليمان (?) قدر
كعباح (?)
خاقان

Second Variety.

15 coins. Plate I, fig. 31.

Obverse.

The same as
1st var.

Reverse.

Area as on obv.
Legend as on 1st variety.

(3) Masa'ūd (?); 17 coins, copper; not in *British Museum Catalogue*; mint and date lost with margin; weight 34–92 grs., average 70 grs.; size 0.0325–1.25". From M. 2, G. 7. Plate II, fig. 26 and 30.

Obverse.

Area in double-lined circle.

لا اله الا
الله محمد
رسول الله

Inscribed margin nearly
obliterated, only *امير... المظفر*
visible.

Reverse.

Area in double-lined circle.

(?) صمصا فر
مسعود
(?) الحوالة

Margin, inscribed with date,
nearly obliterated, apparent-
ly 977 in words.

(4) Six coins; copper; similar to No. 2. Not read.

(5) Ten coins; copper, of 8 different kinds; unread; five of them shown in Plates I, 7 and 23, II, 24, III, 13 and 14. Two from G. 4.

(6) Two coins; silver; in very indifferent condition; unread; apparently Mongol issues. Weight 30 and 21 grs., size 0.9" and 0.83". From M. 2.

(7) One coin; gold; mint and date lost with margin; weight 75 grs.; size 0.83". Plate III, 16.

Obverse.	Reverse.
Circular area.	Circular area.
لا اله الا الله وحده لا شريك له	لا اله الا الله محمد رسول الله
Inscribed margin, almost entirely obliterated and illegible.	Margin inscribed with date, almost entirely obliterated, only سنة visible.

(i) *Line of Shaibān.*

Iskandar; 1 coin, silver, with a loop for suspension; apparently similar to *British Museum Catalogue*, Vol. VII, Nos. 135 and 145; mint and date obliterated (reign 1560–1583 A.D.); weight 62 grs., size 1.25". Plate III, 12.

Obverse.	Reverse.
Square area.	Eight-foil area
لا اله الا الله محمد رسول الله	with two five-rayed stars. ☆ خان اصك بها... ند ☆...
Margin nearly obliterated, only [المومنين] at bottom visible.	Margin entirely obliterated.

VIII. MODERN TURKĪ COINS.

(18th and 19th centuries).

There are altogether 18 of these coins which fall into the following three classes.

(a) *Khāns of Khoqand.*

Apparently Shāh Rukh II; 1 coin, copper; mint Khoqand; date lost, but should be 1184 H. (= 1770 A.D.); not in *British Museum Catalogue*; weight 58 grs.; size 0.66". Plate I, fig. 28.

Obverse.	Reverse.
Double-lined square area across another double-lined square, surrounded by arabesques.	Single-lined small circular area within broad ornamental margin.
ح	خو قند ضرب

(b) *Atāliq of Kāshghar.*

Yaqūb Beg; 3 coins, copper; not in *British Museum Catalogue*; mint Kāshghar; date 1293 H. (1876 A.D.); weight 51–58 grs., size 0·625". Plate I, fig. 27.

Obverse.		Reverse.
خان	خان	کا
۱۲۹۳	or ۱۲۹	شغر
عبد	عبد	ضرب
	۳	
العزیز	العزیز	

Both areas within a double-lined circle, surrounded by a circle of dots.

(c) *Coins of Yārqand.*

There are 14 of these coins. They are heart-shaped, and their legends are counter-sunk. There are three varieties, differing by the obverse legends; the reverse legend of all (see Pl. II, 28, first figure on the left) is ضرب یارقند or mint Yārqand (or possibly یارکند Yārkaṇḍ). There is no date. Weight 107–132 grs.; size 0·75 × 0·5625". The obverse legends have not been read; two of them are shown in Plate II, 28; the third in Plate III, 17. One of them (Pl. II, 28, on extreme right) is, by Munshī Aḥmad Dīn, doubtfully read ضونگدائی خان. This particular variety is the commonest. From M. 2, 3, 6, 9; G. 7, 10.

IX. MODERN INDIAN COINS.

The total of these coins is 59. They are of a very great variety, as follows.

(a) *British Coins.*

(1) East India Company; Sumātra; 1 coin, copper; obv. Cock; rev. native legend, with date 1247 H. (=1831 A.D.). See *Indian Museum Catalogue*, No. 12083, in Vol. II, p. 133.

(2) One $\frac{1}{2}$ Anna piece of 1889. Copper. Obverse: *Victoria Empress*.

(b) *Native States.*

(1) Bhūj; 1 coin, copper; weight 52 grs., size 0·6". Obv. in Nāgarī, round margin, *Ḥrī Khegār-jī Mirjā Mahārāo*, in centre trident, with 1938 (Samvat) below it (=1882 A.D.). Rev., in Persian, *zarb Bhūj, Victoria Quīṣar-i-Hind*, in centre *sanah* 1882 (A.D.), with Rājput dagger below it. Plate II, fig. 31.

(2) Bhopal; 1 coin, copper, $\frac{1}{4}$ anna; mint Bhopal; date 1277 H. (=1860 A.D.). See *Journal, Asiatic Society of Bengal*, Vol. LXVI, p. 270, Pl. XXXIII, fig. 57.

(3) Orchā; 1 coin; silver; 1 Rupee; mint Ūrchā; date 1211 H. (=1798 A.D.). See *Journal, Asiatic Society of Bengal*, Vol. LXVI, p. 267, Plate XXXII, fig. 29.

(4) Sikh State; 10 coins, of different varieties, all copper:

(a) 2 coins; obv., star; rev., legend, date 1894 *Samvat* (=1838 A.D.); mint-mark, leaf. Plate II, fig. 29. As in *Journal, Asiatic Society of Bengal*, Vol. L, Plate IX, 68 (p. 90).

(b) 2 coins; obv., mint Amritsar, with mark of leaf; rev., Gurmukhī legend, and mark of sword.

(c) 1 coin; with mint-mark of leaf on reverse; as in *ibidem*, Plate VIII, 53, but in very indifferent condition; weight 122 grs.; size 0·83''.

(d) 2 coins; legends in Persian characters; obv., mint-mark, leaf within *س* of *jalūs*; rev., *zarb*; but both mint and date lost; weight 188 and 86·5 grs.; size 0·916'' and 0·75''.

(e) 1 coin, with Gurmukhī legends, similar to *ibidem*, Plate VII, 52. Weight 159·5 grs.; size 0·916''.

(f) 2 coins; obv., mint-mark leaf, and mint on one *khīṭah Kashmīr*, on the other *Jammū*; rev., legend Nānak *Shāh* with a leaf-ornament; weight 209·5 and 121·5 grs.; size 0·9'' and 0·8''.

(5) Nepal; 1 coin; a modern paisā of the present reign; date illegible.

(6) Jammū; 1 coin; weight 90 grs., size 0·7''; obv., Nāgarī legend; rev., Persian legend with date 1937 Sam. (=1880 A.D.).

(7) Kashmīr; 6 coins of two sizes, all extensively clipped, with Nāgarī on obverse and Persian on reverse, and leaf and sword as mint-marks:

(a) large, 1 coin, size 0·75''; weight 84·5 grs.; date 194* Sam. (=188* A.D.).

(b) small, 5 coins; size 0·6–0·7''; weight 47–48 grs.; dates 1938, 1939, 1941 Sam. (=1882, 1883, 1885 A.D.).

(8) Afghān; 6 coins, of different varieties; all copper:

(a) 3 coins, of Timūr *Shāh* Durrānī, ordinary Persian legends on both sides; obv., name and regnal year 12; rev., mint Kashmīr, date 118* H. (=177* A.D.); weight 230–278 grs.; size 0·8–0·9375''.

(b) 2 coins; apparently also of Timūr *Shāh*, but name lost, date of one 1165 H; rev., of one *zarb Kashmīr*, of the other, *khīṭah Kashmīr*, date lost; weight 119 and 130 grs.; size 0·75'' and 0·625'', but much clipped.

(c) 1 coin, ascription uncertain; obv., curved sword in ornamental ellipse; rev., *zarb Kashmīr sanah 2* (?); weight 86 grs.; size 0·9''.

(9) Unidentified coins:

(a) large; 6 copper; 3 square, 3 round; with most fragmentary legends; weight 169·5–83 grs.; size 0·7–0·66''.

(b) small; 24 copper, all round, with most fragmentary legends; weight 46·5–4 grs.; size 0·333–0·5625''.

X. MODERN EUROPEAN.

A Russian copper coin; got from the house of a Khotan merchant; obv., Imperial arms, rev., Imperial monogram within laurel crown, and date **1758 A.D.**; weight 802 grs., size 1·66''. Plate II, fig. 32.

X. SEALS, INTAGLIOS, CAMEOS, ETC.

(Plate III.)

The total number of these objects in the collection is sixty-five. They are of a great variety, in point of material, size, shape, form, and engravement. There are also ten unfinished pieces (all of stone) which had clearly been cut to make seals, but which bear no engraving of any kind. Most of these objects come from the Takla Makan desert, and belong to M. 2, M. 3, M. 4, M. 6, M. 9, G. 7 and G. 10. A few, belonging to G. 4, come from Western Turkestan.

With regard to material, there are of

brass or copper, bronze	37 specimens,
stone or glass, or ivory	28 „
			65 „
		Total	...

In size, they vary very widely; from 1·25'' to 0·25'' (Pl. III, fig. 21) in length.

In shape, there are the following varieties:—

Square or nearly so	...	22 specimens	
Oblong	...	3	„ (Pl. III, 19, 23, 39)
Triangular	...	1	„ (Pl. III, 68)
Quaterfoil	...	2	„ (Pl. III, 71)
Round or nearly so	...	23	„
Elliptical	...	14	„
Fanciful	...	1	„ (Pl. III, 80)
		66	„
		Total	...

With regard to form, among the seals there are three made in the form of the ordinary signet-ring, to be worn on the finger. One of them is complete (Pl. III, 27 and Pl. XIX, 3); in the case of the other, two portions of the ring are missing. All three are of brass, and belong to M. 2. There are also five pieces, all of stone, which are cut in the form of a signet-ring, but their ring-portion is solid, with a hole drilled through it, in order to be worn on a string (Plate III, 62 and Plate XIX, 2). All these solid rings belong to G. 4, and probably came from Western Turkestan. The usual form of the seal, however, is a thin, flat plate, to the back of which is attached a small perforated peg for the passage of the string on which it is worn (Plate XIX, 4). All the seals of this kind are from the Takla Makan desert. They are also all of brass or copper, except one (Pl. III, fig. 29) which is made of steatite. One seal, of bronze, is furnished with two flaps (Pl. III, fig. 22 and Pl. XIX, 6).

Among the intaglios, there are two with a high, conical back (Plate III, 63 and Plate XIX, 7). They are both of glass, and came from the Takla Makan desert. All the rest are flat pieces of stone or glass, of the usual form, with a rounded or planed back.

Two of the objects (Pl. III, 65 and 73 and Pl. XIX, 8) appear to have merely served as ornaments, as they are provided with the remains of what seems to have been a nail. These are from the Takla Makan.

One object (Plate III, 23 and Plate XIX, 5) seems to be one of a set of dice used in divination. This, also, comes from the Takla Makan desert.

With reference to the matter engraved, it consists either of some writing, or some figure, mostly human or animal, or some ornamental design. Particulars, so far as definable, will be found in the following detailed description. The figures on the Plate are all full size.

Plate III, No. 18. Round intaglio of black glass †⁴³ engraved with Arabic characters, apparently *'afiyat Nādir* or "Success of Nādir." From G. 4.

No. 19. Oblong flat brass seal, with perforated peg; face engraved with what looks like writing in Persian characters (... *سید*). From M. 2.

No. 20. Obverse and reverse of a square amulet, of ivory; *⁴³ thickness $\frac{1}{7}$ th of an inch, through which runs a fine string-hole; both

⁴³ For the identifications marked * and † I am indebted to the kindness of Mr. C. L. Griesbach, C.I.E., and Dr. Fritz von Nötling respectively, of the Geological Survey of India. Mr. Griesbach informs me (19th January, 1899), that "the stones might all have come from Badakshān or Bokhara. Lapis lazuli comes certainly from Badakshan, and spinel is found in Shignan and other places on the upper Oxus, also at Tagdallak east of Kabul."

faces engraved with what looks like writing. From the Takla Makan; consignment unknown.

No. 21. Minute lozenge-shaped intaglio of bronze, engraved with minute writing, apparently Arabic, unread. From G. 10.

No. 22. Square bronze seal; back furnished with two flaps, apparently for fixing to a handle (Pl. XIX, 6); face engraved with what seems to be writing. From M. 3.

No. 23. (Pl. XIX, 5). An oblong piece of brass, with four equal sides measuring $\frac{9}{16} \times \frac{6}{16}$ inches, the ends accordingly being $\frac{3}{8}$ th of an inch square; perforated right along its long axis, and bearing engravements on all its four long sides. One side shows a dot; the side next to it has two strokes; these would seem to be intended for the numbers 1 and 2. On the other two sides one would expect the numeral signs for 3 and 4; and so they may be; but they are very indistinct, and, curiously enough, seem to suggest human standing figures: that on the third side being a long-robed woman with shield and spear; that on the fourth side, a man standing to the left before a fire altar, as on Kanishka's coins. But these resemblances may be deceptive, the engravements being excessively corroded. The piece is probably one of a set of dice, such as are still used in the present day for purposes of divination. See the remarks below.

No. 24. Elliptical intaglio; Grecian; engraved with nude figure of a man standing to front, with his wrists behind his back, bound to a pillar (Prometheus?).

No. 25. Elliptical intaglio; Indian; engraved with bust of a woman, showing ancient Indian fashion of hair-dress.

No. 26. Elliptical intaglio; Grecian; engraved with seated draped figure of woman to left; perhaps Tyche with cornucopiæ in left and sceptre in right hand.

No. 24 to 26 were found "near Khotan," and are those "three pieces of yellow crystal of an oval shape" mentioned on p. xxxii of the Introduction. Mr. Macartney only sent me impressions taken in sealing-wax. From these plaster-casts were made by me for the photographic plate. This accounts for the want of clearness in the figures.

No. 27. Elliptical signet-ring of brass. (Plate XIX, 3). Engraving too much worn to be clearly recognised; apparently a woman seated to left on a wicker-stool. From M. 2.

No. 28. Obverse and reverse of a square amulet, made of serpentine*; thickness $\frac{3}{8}$ th of an inch, perforated with a string-hole. Obv., centaur to right, holding some object in each uplifted hand; below a four-rayed star, like \times . Rev., lion to right, with open mouth threatening a man in attitude of supplication before him; above tail three dots. From M. 3.

No. 29. Round seal or button, of steatite*, with perforated prominence on back, engraved with rude radiate sun-face. From M. 3.

No. 30. Round intaglio of red cornelian, engraved with the head of a woman. From G. 10.

No. 31. Round intaglio of black glass†, engraved with the head of a man (Parthian?). From G. 4.

No. 32. Elliptical intaglio of red cornelian; Grecian; Pallas to right, in long robe and helmet with spear and shield. From G. 4.

No. 33. Similar to No. 32. Apparently draped female figure to left. Original gone astray.

No. 34. Square flat brass seal, with perforated peg, showing kneeling figure of a man to left, with uplifted right arm, before some small indistinct object (fire-worshiper?). From M. 2, found at Aq Sapil.

No. 35. Square brass flat seal, with broken, perforated peg at back, engraved with two men, standing to front, but facing one another, both in the same attitude, left arm uplifted, right arm suspended. From M. 2, found apparently in Kök Gumbaz.

No. 36. Elliptical intaglio of very thin brown glass, convex, about one-half broken off and missing. Engravement, nude figure, apparently a monkey, with feathered helmet, holding up a branch in left hand. From G. 4.

No. 37. Round intaglio, of blue glass*; showing draped (female?) figure, seated cross-legged to front, with uplifted arms, holding in left hand a wreath (or sun?), in right hand a crescent. Posture similar to that of king or deity on Indo-Scythian and Gupta coins; compare *Ariana Antiqua*, Plate, xviii, 4, 5; *British Museum Catalogue*, Pl. xxix, 4. From M. 3.

No. 38. Elliptical intaglio, of lapis lazuli*, showing head of a bird to right, wearing helmet or cap. From G. 10.

No. 39. Oblong intaglio of sardouix*, very deep red, with whitish surface on the engraved side; showing nude dancing girl, wearing very heavy girdle and anklets, standing to right, and presenting some lengthy object in both forth-stretched hands, in posture similar to soldier presenting arms. From G. 10.

No. 40. Round intaglio, of glass or obsidian,* showing a goat or long-horned gazelle, walking to right. From G. 10.

No. 41. Square flat bronze seal, with perforated peg, showing a hare sitting to right. From M. 2.

No. 42. Square flat brass seal, with perforated peg (broken), showing a crude calf, walking to left. Similar to No. 43. From M. 2, found at Aq Sapil.

No. 43. Round brass seal, with perforated peg, showing a sheep or goat walking to right. From M. 9.

No. 44. Square brass signet-ring (portion of ring missing), engraved with large-horned sheep (*ovis Poli?*) walking to left. From the Takla Makan desert; consignment unknown.

No. 45. Round intaglio of blackish agate with whitish surface on the engraved side (similar to No. 39), showing a deer running to right. From G. 10.

No. 46. Round solid perforated seal-ring, of whitish agate,† showing a crudely made hare (?), running to right. From G. 4.

No. 47. Round intaglio, of spinel*, showing a hare running to right. From G. 10.

No. 48. Square flat brass seal, with perforated peg (broken), showing head of a bull *en face*. From M. 2, found at Aq Sapil.

No. 49. Round intaglio, of sardonix*, very deep red, with whitish surface on the engraved side (similar to No. 39), showing a cow standing to right, with suckling calf. From G. 10.

No. 50. Round flat brass seal (much worn), with perforated peg (broken); showing a sheep, walking to left, very crude. From M. 6.

No. 51. Round intaglio of red cornelian; showing a horse, bridled and belted, jumping to left. From G. 4.

No. 52. Round flat brass seal, with perforated peg, showing an elephant standing to left. From M. 2, found at Aq Sapil.

No. 53. Square flat brass seal, with perforated peg (broken), showing an elephant, walking to left, harnessed with drapings and carrying a Buddhist relic casket. From M. 2, found at Aq Sapil.

No. 54. Elliptical solid perforated seal-ring, of whitish brown-veined agate†; showing Brahmani (humped) bull, standing to right, within chaplet of astragals. From G. 4.

No. 55. Round flat brass seal (much worn), with perforated peg (broken), showing a lion, walking to left. From M. 2.

No. 56. Round intaglio, of red cornelian, showing a lion walking to right. From G. 10.

No. 57. Elliptical intaglio, of lapis lazuli*, showing Pegasus walking to right; two unread letters (Pahlavi?) above hind-quarters. From M. 3.

No. 58. Round brass seal (broken), with perforated peg, showing a goose walking to left. From M. 2.

No. 59. Round solid perforated seal-ring, of whitish agate,† showing parrot walking to right. From G. 4.

No. 60. Square flat brass seal, with perforated peg (broken)

showing a roaring lion, seated to right, similar to No. 61, but without raised paw. From G. 7.

No. 61. Square flat brass seal, with perforated peg, showing a lion or cat sitting to right, with open mouth and uplifted left paw. From M. 2, found at Aq Sapil. Another, but smaller specimen, from G. 7, has the paw not uplifted.

No. 62. Round solid perforated seal-ring, made of whitish agate,† showing a scorpion, walking to right, with raised sting. From G. 4.

No. 63. (Pl. XIX, 7). Conical intaglio, of green glass (much corroded); engraving indistinct, apparently a locust, flying to right. From M. 4.

No. 64. Round flat brass seal (broken and much corroded), with perforated peg, showing two birds (bulbul?) facing each other and fighting. From M. 2, found at Aq Sapil.

No. 65. Round flat ornament of copper, with ring attached to rim, for wearing. In the centre, remains of a nail, showing that originally there was something attached to its back. From M. 9.

No. 66. (Plate XIX, 8). Brass nail with round ornamental head, formed like a mushroom.

No. 67. Round flat brass seal, with perforated peg (broken), showing radiate sun-face, or perhaps wheel.

No. 68. Triangular flat brass seal, with perforated peg, showing a scorpion, walking to right. From M. 6.

No. 69. Elliptical intaglio of red cornelian, engraved with an uncertain design (pair of cymbals?) From G. 4.

No. 70. Square flat brass seal, with perforated peg (broken), showing an ornamental design. From M. 6.

No. 71. Quarterfoil flat brass seal, with perforated peg, and original piece of thread on which it was worn. Engraved with an ornamental design. From G. 10. Another specimen was in M. 2. See No. 79.

No. 72. Square brass signet-ring (larger portion of ring missing), showing an ornamental design. From the Takla Makan; consignment unknown.

No. 73. Round intaglio of whitish glass,† engraved on one side with the figure of two crossed swords or arrows, on the other, with some kind of faintly incised writing. From G. 4.

No. 74. Obverse and reverse of a round amulet, of serpentine;* thickness, $\frac{1}{8}$ th of an inch, perforated with a fine string-hole. From the Takla Makan; consignment unknown.

No. 75. Elliptical solid perforated seal-ring, of Bowenite,† engraved with fire-altar, as on Sassanide coins. From G. 4.

No. 76. Square flat seal of brass, with perforated peg, engraved with an ornamental design. From M. 2, found at Aq Sapil.

No. 77. Square flat seal of copper, bearing four square ornamental designs, two of them being different forms of the Svastika. From M. 6.

No. 78. Square flat copper seal, with perforated peg, engraved with an ornamental design. From M. 6.

No. 79. Square flat seal of brass, with perforated peg, engraved with an ornamental quaterfoil design. From M. 2, found at Aq Sapil. Another specimen, of the same size, was in M. 9. See No. 71.

No. 80. Flat copper seal, consisting of a square surmounted with a tridental crown, and furnished with a perforated peg. Bearing ornamental designs, that on the square being the same as on No. 79. From M. 6.

No. 81. (Plate XIX, 11). Elliptical intaglio, perhaps of felsite* ; Grecian ; showing a draped and helmeted figure, sitting on a stool (?), holding a bird (?) on his outstretched right hand. From G. 4.

There is one cameo in the collection. See Plate XIX, 9. From G. 10. It shows the helmeted head of a young man, of Grecian design.

Among the gems, shown on p. 779 of Dr. Sven Hedin's *Through Asia*, and obtained by him in Khotan, there are several which are strikingly like some in the British collection. Thus the second in his first line of facsimiles resembles our No. 30. There are three other similar ones on that page, but they differ in having a ribbon round the neck of the figure shown on it. There is also there one gem strikingly like our No. 29. The deer, hare, and large-horned sheep are also found on several of them.

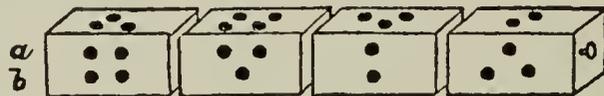
But what is more noteworthy is that exactly similar seals and intaglios have been discovered in the ancient stūpas of Afghanistan. Samples of these are shown in Wilson's *Ariana Antiqua*, Plates i, iii and iv. Thus figs. 7–10 on Pl. iv, show two square flat seals with perforated peg, made of iron or brass. Plate i, fig. 8, Pl. iii, fig. 7 and Pl. iv, figs. 10, 11 are similar cornelian intaglios. The signet-rings, shown on Pl. i, 5, and Pl. iii, 6, though similar in shape to our Nos. 27, 44, 72, differ in being more costly, being of gold with inlaid cornelians, while those in our collection are made entirely of brass or copper.

I may also note the evidences afforded by these objects to the prevalence of Grecian and Buddhist culture in ancient Khotan. Nos. 24, 26, 32, 33 on Pl. III and No. 11 on Pl. XIX are distinctly Grecian ; so are the centaur on Pl. III, No. 28, and the pegasus on No. 57. Distinctly Indian are the Brāhmanī bull on No. 54, and the elephant on Nos. 52, 53. Distinctly Buddhist are the Svastika on

No. 77, and the relic-carrying elephant on No. 53. Old Persian (Zoroastrian) are the fire-altar on No. 75, and the fire-worshipper (?) on No. 34.

With reference to No. 23, I may explain that there is a certain system of divination, well-known all over Northern India. It is practised, I believe, only by men of the extreme North-West, "Kashmiris" as they are commonly called, who are, as a rule, Muhammadans. They use a double set of four brass dice, strung on two short iron rods, round which they freely revolve; four dice on each rod. The eight dice are all made exactly alike; being rectangular parallelepipeds (Pl. XIX, 5), with only four equal sides (not cubes), and marked, on the long oblong sides, with the numbers 2, 3 and 4, denoted by dots, in such a manner that 2 stands on the side opposite to 4, and 3 opposite to 3, as shown in the subjoined woodcut.

No. 10.



The short square sides, of course, which are perforated for the iron rod, bear no numbers; nor is the number *one* used. The dice look as if they were made of brass, but they are said to be of a special alloy of seven metals, consisting of brass, pewter, iron, lead, silver, gold, and copper. The operator throws the two strings of dice so that they fall parallel to each other, and then counts the dots in parallel lines; thus, lines *a* and *b* give 6 each, arranged as $2 + 2 + 1 + 1$ and $2 + 1 + 1 + 2$, or a combination of 12. Each of the two lines might give any number from 4 to 8, and between them a great variety of arrangements and combinations. From these variations the diviner makes his forecasts.⁴⁴ The object, described under No. 23 looks very much like one of such a set of dice, only that its faces are marked differently from what is the custom at the present time.

⁴⁴ A description of the alloy as well as of the *modus operandi* in divining with such dice will also be found in the "Third Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1884 to March 1886," by Professor Peterson, pp. 44-46, printed as an Extra-Number of the Journal of the Bombay Branch of the Royal Asiatic Society. Both the description and the sketch of the dice are not quite accurate.

SECTION II.—BLOCK PRINTS.

GENERAL REMARKS.

The following is a summary of the Block-prints in the collection :

I.	First Set	comprising	8	books.
II.	Second Set	„	6	„
III.	Third Set	„	3	„
IV.	Fourth Set	„	8	„
V.	Fifth Set	„	8	„
VI.	Sixth Set	„	3	„
VII.	Seventh Set	„	6	„
VIII.	Eighth Set	„	1	„
IX.	Ninth Set	„	2	„
			<hr/>	
	Total	...	45	books.
			<hr/>	

With the exception of one, the block prints all alike resemble European books in their style of binding.¹ A sheet of paper is folded in the middle to form two leaves, with four pages. A number of such folded sheets or “forms” are then fastened together, along the line of the fold, to make up a book. For the purpose of fastening them, they are, as a rule, simply laid one upon the other; but there are three books, all belonging to the Third Set, in which they are not laid one upon the other and outside the other, but placed one within the other so that the entire book forms but one folded bundle. Occasionally also, as in No. I of the First Set, a double form is met with, made up of two folded sheets, placed one within the other and thus consisting of four leaves or eight pages. The fastening is done in three ways: either by thread (2), or by twists of paper (12), or by pegs of copper (30).² The last-mentioned method is the commonest: the relative frequency is indicated by

¹ See also my Note on some Block-prints in the *Proceedings, Asiatic Society of Bengal*, for April 1898, p. 124.

² I may add that Mr. C. Bendall informs me (in a letter dated the 1st October, 1897) that the British Museum possesses a book in which “the peg is of wood, not metal.”

the bracketed numbers. The pegs are applied like rivets, that is, their ends are bent over and beaten down fast; but before doing so, they are passed, through thin pieces of copper, as a protection to the leaves. Sometimes (as in No. VII of the First Set, No. III of the Fifth Set and No. V of the Seventh Set) these guards are round ornamental pieces, resembling coins, as shown in fig. 3 of Plate IV; or they are elliptical (as in No. VIII of the First Set) or oblong (as in No. VI of the Seventh Set); but many of them (as in Nos. I and VII of the First Set, Nos. I and III of the Fourth Set, No. III of the Fifth Set, and No. I of the Seventh Set) are evidently portions of a large ornamental circular plaque which had been cut into pieces; and in this case the pieces are very large, as shown in Plate IV, fig. 1. In two cases (in No. I of the Second Set, and in the book of the Eighth Set) the guards consist of two long slips of copper, extending the whole length of the book. The twists of paper are applied, like pieces of string, to form loops. The stitching with thread only occurs in two books, in No. II of the Third Set and in the book of the Ninth Set. As a rule the fastening is made in three separate places, by three nails, or three twists of paper, or three loops of thread. Twice, however, in No. III of the Fourth Set and in the book of the Ninth Set, four pegs and four threads respectively are used; and once, in No. II (Pōthī) of the First Set, only one peg. A fastening in two places is more frequent; four times (in No. VIII of the First Set, Nos. V and VI of the Fifth Set, and No. IV of the Seventh Set) only two pegs are used; and twice (in No. VII of the First and No. VIII of the Fifth Set) only two twists of paper. The three initial and the three final pages are as a rule left blank; and thus the first and the last leaves, being blank, serve as covers to the book. In one case (No. VIII of the Fifth Set) seven initial and seven final pages (*i.e.*, three leaves on each side) are left blank. The probable object of this arrangement is disclosed by No. II of the Second Set and No. I of the Fifth Set, in which four and two leaves respectively have been pasted together to form pasteboard covers at either end. The single exception above referred to is a *pōthī* (No. II of the First Set), that is, a book

The Pothi.

arranged in the Indian fashion. In this case, the whole collection of "forms" is placed between two pieces of wood, and held in position by riveting it with one copper peg, passed through the middle of one of the narrow sides, as shown in Plate VIII. The arrangement is exactly the same as in the case of a set of Indian copper-plates of a landgrant. The peg takes the place of the seal-ring of the grant, or of the string of a manuscript. The two ends of the peg are split in two, and the two splits are turned over right and left, after having been passed through the thin copper

guard; thus the whole *pōthī* is kept firmly fixed. The two wooden covers are thick rough pieces ($8\frac{1}{2} \times 4\frac{3}{4} \times 1''$) of a very light kind of wood, the outside surfaces of which are not planed.

In size and shape the block-prints vary greatly. Some are narrow oblongs, measuring from $9\frac{1}{2}$ to $14\frac{3}{4}$ by 4 to $4\frac{1}{4}$ inches; but mostly they are broad oblongs, the largest measuring $23\frac{1}{2} \times 13\frac{1}{2}''$, the smallest, $6\frac{3}{4} \times 4\frac{1}{4}''$. Their thickness, also, much varies, depending, of course, partly on the number of forms contained in them, partly on the thickness of their paper. The thickest is the *pōthī*, its wooden covers alone measuring together two inches. Further details of measurements will be given with the following description of the several xylographs. In a few cases the corners are slightly rounded off: in one case this is done so much as to render the shape of the book elliptical; see fig. VIII in Woodcut No. 12. The edges of the leaves are frayed, as if the sheets had been cut with a blunted or notched instrument. Very exceptionally I have found the edge of a pair of leaves uncut. In these cases, when fastening the book, a folded sheet had been put in wrongly with the fold outside instead of inside. On the other hand, in five cases (First Set, Nos. IV and V, Fourth Set, Nos. III and VII, Seventh Set, No. V) I have found all the folds cut through, so that practically the book consists of separate leaves, instead of forms. This is also the case in No. VII of the Fifth Set, where, however, the leaves appear to have become separated by the wear and tear of the folds.

The xylographs are all printed on paper. The paper appears to include, at least, three distinct classes. One class is a soft paper, thin, and of even texture, much like the white or whitish paper of the Weber and some of the Macartney Manuscripts, published by me in the Journal of the Asiatic Society of Bengal, Vols. LXII and LXVI, which is believed to be made of the bark of the laurel (*Daphne*). This class of paper is found only in the one book which constitutes the Eighth Set. It has a deep yellow colour, which is probably a tint artificially imparted. Another class of paper is only found in the book and the roll, comprised in the Ninth Set. This is an exceedingly thin, almost transparent, tough paper, of even texture, with a light yellowish tint, probably natural. In its present condition it has become somewhat brittle, from age. Except in colour, it reminds one of what, in the trade, is known as "parchment overland paper;" in fact, at first sight I thought it was very fine vellum, though on closer examination and washing, it at once revealed itself to be paper. The most common is a third class of paper, of a more or less uneven texture and thickness, the prevailing colour of which is a more or less dirty yellowish-brown

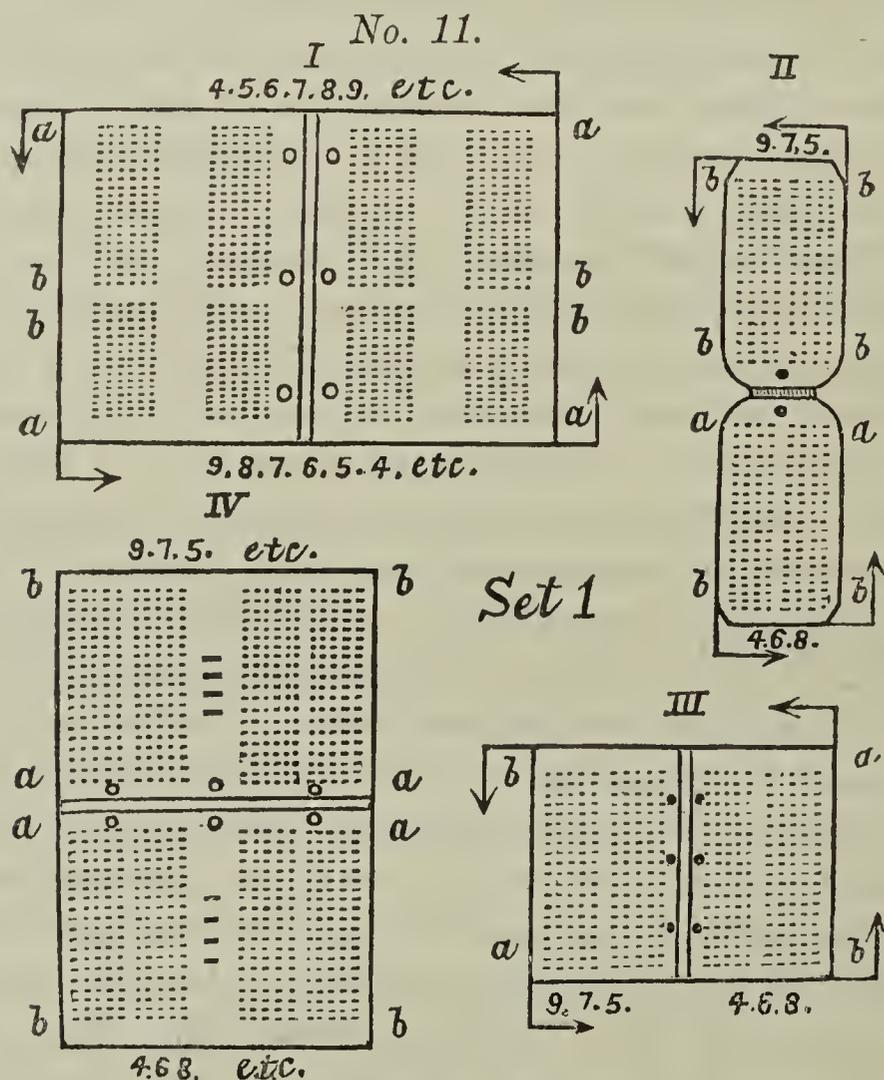
Four distinct varieties are observable. The first variety is a soft, thickish paper, to the touch resembling felt or cloth, of comparatively even texture and rather brighter yellowish-brown colour. It is found in nine books; *viz.*, Nos. I and II of the First Set, Nos. I, III, IV, V and VI of the Second Set, and Nos. II and III of the Third Set. The second and third varieties differ from the first variety only in being progressively thinner, of more uneven texture, and of darker colour. The third variety, indeed, is occasionally of an exceedingly flimsy make. The second variety is found in nineteen books; *viz.*, Nos. II, III, IV and V of the First Set, No. II of the Second Set, No. I of the Third Set, Nos. I, II, III, IV, VI and VII of the Fourth Set, Nos. I, II and VIII of the Fifth Set, and Nos. I, II, III and V of the Seventh Set. The third variety is found in five books; *viz.*, Nos. VII and VIII of the First Set, No. V of the Fourth Set, No. III of the Fifth Set, and No. VI of the Sixth Set. All these three varieties are comparatively soft papers, and in this respect differ from the fourth variety, which is a hard and stiffish paper, of middling thickness, and of very uneven make. This fourth variety much resembles, except in point of colour and age, the kind of paper which is still made in Khotan at the present day. It is found in nine books; *viz.*, No. VIII of the Fourth Set, Nos. IV, V, VI, VII of the Fifth Set, and Nos. I, II, III and IV of the Seventh Set. With the exception of one book, they all belong to M. 8; and the single exception belongs to M. 9. The three other varieties do not resemble the modern Khotanese paper, though it is probable that they all are of Khotanese manufacture, being probably made of the same material, and by the same or a similar system of preparation. I am disposed to believe that the four varieties of this class of paper represent four different periods and four successive degradations of Khotanese paper manufacture. The texture of the modern Khotanese paper is exceedingly coarse and uneven, its pulp having been prepared very roughly and spread very unevenly. When fresh, the paper has a creamy or greyish colour: the much darker colour of the corresponding paper of the block-prints is the effect of age. Regarding its material I have received two different statements. The Rev. Magnus Bäcklund, Swedish Missionary in Kashghar, who has visited Khotan, informs me in a letter, dated the 29th June, 1898, that "it is made of the bark of the willow, softened in lye, and then taken up and beaten between flat stones, which of course, cannot be made so well as to prevent small pieces of bark remaining here and there." According to Munshī Aḥmad Dīn, of the Kashghar Agency, in a note written for me on the 19th December, 1898, "the Khotan paper is a very coarse stuff, chiefly composed of silk waste." In the sequel these classes and varieties of

paper are referred to as I, II, IIIa, IIIb, IIIc, and IIId respectively. The paper of the Pōthī (No. II of the First Set) I am doubtful in classifying, but it probably belongs to Class IIIb.

That these books were printed from blocks of type is apparent from the fact that the text is repeated over and over again, from page to page, the repetitions being facsimiles, as shown by measurements made by me (see below under the First Set). The type, cut on the block, was enclosed in a square of raised straight lines, and occasionally these inclosing lines are printed off along with the inclosed type; but as a rule they do not seem to have been inked, and only a few traces of them, here and there, are seen (as, *e.g.*, on Plates IX and X). The printing was not always carefully done; occasionally the blocks were inked too much, and the impressions are smudgy: at other times they were inked too little, and the impression is almost illegible. When the print is repeated on the same page, the impressions, for the sake of economy, were sometimes placed so close together as to cause the margins of the prints to run into one another and obliterate the letters. From the fact that sometimes one has to remove the rivets, in order to be able to read the whole of the impression, it is evident, that, as a rule, the sheets or pages were printed first before they were stitched or riveted into books. In some books, especially of the Fifth, Sixth and Seventh Sets, the paper appears to have been more or less strongly greased, before printing, possibly with the object of sizing it; but the process has sometimes had the effect of rendering the impressions almost illegible.

A regular system appears to have been observed in printing the xylographs. As already explained, the first and the last leaves of a book were always left blank, for the purpose of serving as a cover. For the same reason, the exterior pages of the second and penultimate leaves were also left blank. The printing almost invariably commences on the interior of the second leaf (*i.e.*, the 4th page of the whole book), and stops on the interior of the penultimate leaf (*i.e.*, the ante-ante-penultimate page of the whole book). There are a few exceptions, which will be noted in the detailed description; see, *e.g.*, No. VI of the First Set. Thus supposing a book had six leaves or twelve pages, the imprints would commence on the fourth page and stop on the 9th page; pages 1, 2, 3 and 10, 11, 12 being blank. With regard to the arrangement of the imprints on the pages, the principle (to which there are only a very few exceptions) was that they were placed alternately in an upright and reversed position. Whence it follows that, in reading a book, one would at first, read consecutively, throughout the book, all the upright impressions;

next, turning the book right round, one would commence at the back of the book, and read consecutively, right through the book, all the reversed impressions, which, however, would now of course, stand upright towards the reader. The subjoined Woodcut No. 11 illustrates this system, and the various modifications in which it is applied.³ The dotted lines in the diagrams signify the lines of type, and the letters *a* and *b* indicate the beginnings and endings respectively of the impressions of the text. In No. I, there are two impressions in each column, standing foot to foot; those in the upper halves of the pages standing upright, while those in the lower halves are reversed. In this book one would read, first, consecutively all the impressions in the upper halves of the pages, in regular order (4, 5, 6, 7, 8, 9, etc.), up to the end of the book. Next turning the book right round, in the direction of the arrows, and thus bringing the reversed impressions into an upright position, one



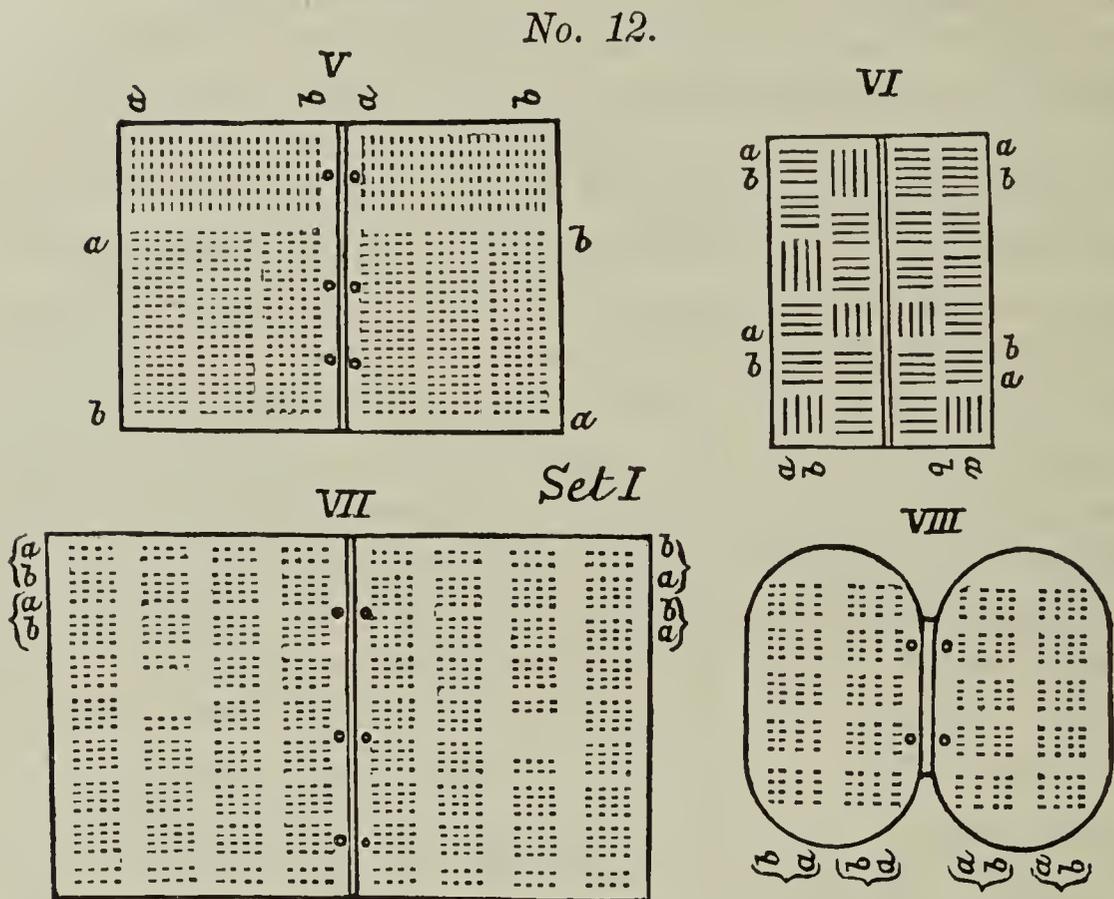
would read consecutively all the impressions (of the formerly lower half-pages) from the back to the beginning of the book, in regular order (etc., 9, 8, 7, 6, 5, 4). The same system, in another, slightly modified form,

³ The Roman numbers in this and the following Woodcuts refer to the books of the First Set. The diagrams are drawn to the scale of 1 inch in the woodcut to 12 inches of the original.

is applied in Nos. II, III and IV. In these books the impressions stand upright on pages 4, 6, 8, etc., but reversed on pages 5, 7, 9, etc. In reading any of these three books, one would begin by reading consecutively all the even-numbered pages (4, 6, 8, etc.), throughout the book. Next, one would turn the book right round, as indicated by the arrows, and thus bring the imprints, which hitherto had stood reversed, into an upright position; and now, commencing at what was the end of the book, one would read consecutively all the odd-numbered pages (etc., 9, 7, 5) up to the original beginning of the book. The same system, again, in a third modified form, may best be seen in book No. II of the Seventh Set. Here the impressions do not stand upright and reversed on alternate pages, but in alternate columns, as shown in the diagram on page 55. Thus they stand upright in columns 1 and 3, but reversed in columns 2 and 4. In reading one would commence with all the left-hand columns consecutively throughout the book; then one would proceed to turn the book right round, and now read all the impressions (of the former right-hand columns) from the back to the beginning of the book. In this way the reading of the entire book would be completed. To this principle of arrangement there are only a few exceptions, in which all the impressions are placed upright (or in the same direction) throughout the book, so that the book can be read right through, from page to page, without turning it right round. This is the case in books No. IV of the Second Set, Nos. IV, V and VI of the Fourth Set, No. II of the Fifth Set, No. II of the Sixth Set, and No. IV of the Seventh Set.

There is, however, a certain number of books, in which the orderly arrangement of imprints, above explained, is not observed. In some of these books, indeed, no system of printing whatever can be discerned. The impressions appear to be placed promiscuously; the only apparent object being to crowd as many impressions into a page as it may, by any device, be made to hold. This may be seen from figs. V and VI of the subjoined woodcut No. 12. Two conspicuous examples of this kind of book are No. VI of the First Set, and No. III of the Sixth Set. With such an arrangement, obviously, no intelligent and orderly reading of the book is possible. Beside these there are some other books in which the absence of all orderly arrangement is not quite so conspicuous. In these the imprints are orderly placed on each page taken by itself; that is, on some pages they are all placed upright, on others, all are placed reversed; but these differing pages do not follow one another in any system. In any pair of pages one may meet with any of the four possible arrangements: upright-upright, upright-reversed, reversed-

reversed, and reversed-upright. All these four arrangements occur with



almost equal frequency. A good example of this kind is book No. V of the Seventh Set. In such books, too, any orderly reading is out of the question.

If it were certain what the object of these books was—whether they were, or were not, intended for reading,—the presence or absence of systematic arrangement of the imprints might afford a good test to determine the genuineness, or otherwise, of

the books. So long as their purport remains undeciphered, their object must be a matter of speculation; but the fact that they contain nothing but interminable repetitions of the same text seems clearly to indicate that in these books we are dealing with set formulas—creeds, prayers, or incantations, or whatever one may call them,—possibly or probably Buddhistic,—the virtue of which was supposed to be in proportion to the frequency of their repetitions. The mode of this repetition, however, need not necessarily have been an intelligent one: it might have been quite mechanical, like that of the prayer-wheel or the prayer-flag. Turning the leaves of a book would serve the purpose of the devotee quite as well as turning a wheel, or letting the flags be moved by the breeze. If this were the object of the books, it is evident that the order or want of order in the arrangement of the formulas would be altogether immaterial, provided the page is well covered with them. In any case, whether the leaves were intended to be read, or merely to be turned,

it is plain that there was no need of numbering them, seeing that, the contents being merely a repetition of a set formula, one might use the leaves in any order. As a matter of fact, none of these books have their leaves or pages numbered. The want of pagination is to be

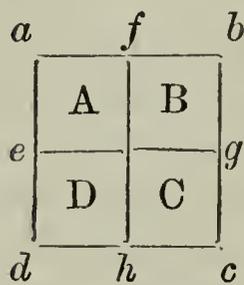
Want of Pagination. regretted, as the numbers might have served as a clue to distinguishing top and bottom of the page, and thus of determining the beginning and end of the formula imprinted on it. The large number of the block-prints and the multiplicity of the scripts contained in them open up another problem as to their object. It would seem that there existed somewhere in the Takla Makan a kind of library, or store of books, the locality of which seems to have been discovered by native treasure seekers, being perhaps an ancient monastery. Moreover the existence, among the block-prints, of collective books (such as comprised in the Sixth Set), which contain impressions of texts in several scripts, seems to show that in that place there must have been a collection of all the different kinds of blocks; and that the place, in fact, was a sort of printing establishment, for the production and distribution of books of (religious) formulas among communities or in localities, using different scripts, and perhaps speaking different languages or dialects.

Number and Identity of Scripts and Formulas. *Prima facie*, there are not less than nine different scripts employed in the block-prints. Accordingly I have distributed them into nine sets. It is not improbable that hereafter it may be shown that some of the scripts are allied to, if not identical with, one another; I mean in this way that one may be the kaligraphic counterpart of a current script. This may be the case, perhaps, with the two scripts shown on Plate V, for they agree in their number of lines. I believe also to have noticed, here and there, the same symbol, in slightly modified forms, in different scripts. In order to arrive at any definite and satisfactory conclusion on this head, a more detailed and minute examination is necessary, for which the time allowed me at present does not suffice, but for which I hope to have leisure after my retirement from India. With my present information, it appears to me likely that the scripts of the First and Second Sets, those of the Third and Fifth Sets, and those of the Fourth and Seventh Sets are pairs the members of which have some more intimate connection with each other. Further, it seems to me possible that the juxtaposition of several formulas in the collective books of the Sixth Set and elsewhere may lead to the recognition of some kind of identity obtaining among them with reference to their purport. As to the language, or perhaps the number of languages, hid in these scripts

and formulas, of course, it is impossible to venture to express any opinion, before some advance has been made in their decipherment.

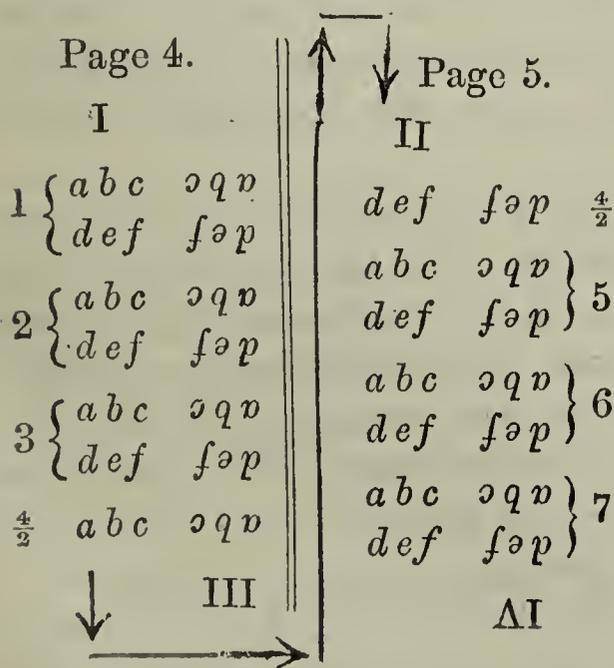
Some of the block-prints are furnished with guards which show in their ornaments a curious resemblance to a certain coin of one of the Urtuqīs of Māridīn. They may be seen on Plate IV, figs. 1–9; the coin also on Plate I, fig. 20. The coin is ascribed to 1232 A. D., see the Section on Coins, p. 31. If the resemblance is not deceptive, it will fix the upper date of the block-prints in question. They could not be older than the middle of the 13th century A. D. There is reason to believe, however, that some of the block-prints must be several centuries older. That there is nothing in the physical conditions of Eastern Turkistan to render such a long period of conservation impossible, I have already remarked in the Introduction, p. xxviii.

The question of what is top and bottom, right and left, of the text, or of the formulas composing the text, is a puzzling one. The determination of it would help to determine the further question of how the script of the texts is to be read, whether from the left to the right in the European fashion, or from the right to the left as in Semitic writing, or from top to bottom as in Chinese. I have not, as yet, come across any absolutely decisive evidence. In some books regularly recurring partial impressions of formulas are met with,—cases in which only a portion (one-half or one-third) of the formula, divided either horizontally or vertically or both ways, is met with. Want of sufficient space on the page is always seen to be the reason for such partial impressions. In such cases it may very plausibly be argued that, when the printer had not sufficient space to print the whole formula, he would preferably print the initial portion of it on the available space. On this assumption we should have an indication of what is the beginning or the end of a formula. Thus let $a b c d$ in the marginal diagram



represent such a complete formula, in which the lines of writing run parallel with $a b$ (as *e.g.* on Plate XII). If $a b g e$, that is, the formula horizontally divided, be the only portion printed, this may indicate that it is the initial portion of the formula. Similarly if $a f h d$, or the formula vertically divided, were only printed, this would show that portion to be the initial one. If further, both portions $a b g e$ and $a f h d$ were found regularly printed in certain delimited places, we should know for certain that the portion A contains the beginning of the formula, and that its reading must commence in the corner a , and proceed from a to b . It would still

remain uncertain whether the script run from the left (*a*) to the right (*b*) in European fashion, or from the top (*a*) to the bottom (*b*) in Chinese fashion. In other words, *a* might be either the upper left-hand or the upper right-hand corner of the formula. Similarly the beginning of a formula might happen to be found to lie in the portion B, in which case the script would run from the right to the left, in Semitic fashion. The two alternative possibilities, here explained, are those actually observed by me in the case of the formulas of the Fourth and Seventh and the formula of the Fifth Set respectively. The former seem to run from the left to the right, the latter from the right to the left. The weak point in this argument is not so much the fact that occasionally the opposite portions (*egcd* and *fbch*) of the formula are found printed; for this might be due to a careless misprint; and the detailed description of the various sets will show that misprints are by no means uncommon. A far more serious difficulty is the uncertainty as to whether the books were intended for reading at all. If they were not intended for reading, but for some kind of mechanical use, the circumstance of what particular portion of the formula was printed in order to represent the whole of it is obviously of no moment. But on the other hand, the regularity in printing a certain definite portion points to method and design, such as one would not expect in the case of printing for mere mechanical use. In the latter case one would expect the portions AB, AD, BC, CD to occur promiscuously. It seems, no doubt, certain that the disorderly books, above mentioned, such as No. VI of the First Set, cannot have been intended for intelligent reading, but, on the other hand, it is by no means certain that some other books may not have been prepared with that object. Book No. II of the Seventh Set is a case in point. The marginal diagram shows the arrangement of its imprints.



The formula is indicated by *abcdef*; it is repeated 7 times on the two pages 4 and 5; the fourth impression is divided between page 4 and page 5, about one-half of the formula standing on either of those two pages. The reader is supposed to read down the left-hand columns which stand upright. Having read down column I on page 4, to the middle of the 4th impression, he continues with the other half of that impression in column II on page 5. He then

turns the book, and similarly reads the remaining (formerly right-hand, but now also left-hand) columns III and IV. Such an orderly arrangement can hardly be explained on any other supposition than that of being made with a view to intelligent reading. Occasionally also anomalies are met with, the only satisfactory explanation of which seems to point to a similar conclusion. One such anomaly will be found discussed in the detailed description of book No. VI of the Fourth Set. It is on considerations such as these, that I have provisionally determined, and shown in the illustrative Plates, the top and bottom of the texts of most of the nine sets of block-prints, as well as the direction of the script of some of them, such as those of the Fourth and Seventh Sets. I do not claim for these determinations more than a provisional character. Very possibly a more minute and thorough examination of the block-prints, than the limited time at present at my command admits, may hereafter lead to more definite results.

The case, above discussed, of book No. II of the Seventh Set, is instructive on another point, namely, whether these block-print books are to be read from the left to the right, beginning with the first page, or from the right to the left, beginning with the last page or at the back of the book, to speak from the European point of view. From the diagram it will be seen that the reader first reads the pages (*i. e.*, columns I and II) from the left to the right (and so on, throughout the book), and then, turning the book right round, from the right to the left (*i. e.*, columns III and IV, and so on, throughout the book). It would, therefore, appear that there is really no right or left, beginning or end of the book, in the sense of the modern European practice. This conclusion seems to be confirmed by the books Nos. I and II of the Third Set, of which, to judge by the arrangement of the text (see the detailed description) No. I must be read from the left to the right, while No. II must be read from the right to the left. See also book No. V of the Second Set.

The question on which side of the page the process of printing commenced, whether on the right or left side, the top or bottom of it, is fairly easy to determine in many cases. When there is a broad, blank margin on one side of the page, while the print runs up to its very edge on the other side; or when a column of print begins with a complete impression of the formula on one side, and ends with a part-impression on the other side, it is fairly certain that the printer commenced his work on the former of the two sides. Books Nos. VI and VII of the Fourth Set afford a good illustration of this conclusion. The point is of

no great importance in itself; but it may in some cases prove auxiliary in determining the orientation of a script or text.

Considering the abundance of the block-prints and the mystery of their scripts, it is not surprising that the suspicion of forgery should suggest itself. It suggested itself to me at an early stage of my acquaintance with the Khotanese books; and I am informed that it has also suggested itself to some of the British Museum authorities and others. But it was not till the summer of 1898 that the suspicion took a more definite shape in a letter, dated the 29th June, 1898, which I received from Mr. Bäcklund, Swedish Missionary in Kashghar, in response to a request by me for information on the subject; for at one time, in the course of my examination of the block-prints my suspicion had been much strengthened by the observation of the extreme want of order in certain books. This result was subsequently neutralised by the observation of the striking consistency of order in other books. It became clear that, as I have already shown, both phenomena are quite compatible with a general genuineness of the block-print books; and in fact, all the evidence that gradually accumulated has tended to confirm that conclusion. Mr. Bäcklund's account is as follows:

“It is my duty to own that till quite recently I have scarcely taken any interest in that old Khotan literature. In April last [1898], however, Islām Akhūn brought to me three copies, which, according to what he told me, had been found in the neighbourhood of Aq Safil, buried under sand in a hollow tree, together with other books of the same kind. Some days before, he had sold two or three copies to Mr. Macartney also,⁴ but nevertheless he urged me not to say a word to Mr. Macartney about my acquisition. Upon my having a look at the books to discover whether they were print or hand-written, he felt somewhat uneasy and whispered, ““it is astonishing how attentively he is looking at the books.”” I offered him less than the half of what he asked, and he not only handed over to me the books without haggling, but also gave me into the bargain some old coins he had with him. When he had gone out, one of our servants, entering my room said, ““Sāhib, I want to tell you that these books are not so old as they are pretended to be. As I know how they are prepared, I wish to inform you of it. When I lived in Khotan, I wished very much to enter into the business, but was always shut out and could even get no information about the books. At last I consulted my mother

⁴ These are probably included among the eight books which were sent to me with a letter dated the 13th April, 1898. They were acquired from Islām Akhūn, but were stated by him to have been found in Kiang Tūz on the road to Cherchen.

about it; and she advised me to try and find it out of a boy with whom I was on very intimate terms, and who was the son of the headman of this business. So, one day I asked him, how they got these books, and he plainly told me that his father had the blocks prepared by a cotton-printer,"" etc. Now it is evident that the servant might have said all this from jealousy only, but I now determined to examine the books with more critical eyes than before. Then the following facts became clear to me immediately:

(1) The rich supply of books, which may be purchased at any price we are pleased to put on them, although every European traveller who has been in Khotan has taken a great interest in them, not mentioning the Russian Consul and Mr. Macartney who have bought what they have come across.

(2) The apparent freshness of them, as for instance—

- (a) the sharp corners of the copper plates and nails which are covered only with a very thin layer of rust;
- (b) no rust from the plates sticking to the paper under the plates;
- (c) the corners of the books quite square (not round, as they usually are in old books), and the edges recently out though in such a manner as to make them look old;
- (d) although without proper covers, the outside leaves as well as the leaves in general were well preserved, but one here and there destroyed *betwixt two fresh ones*;⁵
- (e) no yellow spots or marks of handling by readers, as usually occur in old books;
- (f) the paper, though very ill-treated (burnt and smoky), still strong almost as if it were new;
- (g) the paper exactly of the same kind, as prepared in Khotan in the present day.

Now if these books are forgeries, must not there have been some genuine ones, after which these are made? Certainly, I think so, especially in order to account for the characters. But I do not think they took the pains to copy any text—they may have or they may have not—of the original, but very likely put the letters in a preposterous way to make it look like writing. As for the hand-written ones, I have no particular opinion, as I have had no opportunity to examine them. But I do not think that it is at all impossible that they should be forgeries. You see I purchased the volumes I have spoken of—three of the longest that have been sold—for a total of Rs. 7, and certainly I paid too much. If they can get twice as much, very likely they would not hesitate to prepare actual manuscript."

⁵ The italics are Mr. Bäcklund's.

In a letter written by Mr. Bäcklund to Mr. Macartney, on the 8th April, 1898, the day after he had purchased the above-mentioned three block-print books, I find the following additional information:—"It has been communicated to me by a person, who is well acquainted with these things [apparently the servant above referred to], that these books are not old, but are continually made now-a-days also; and he pretends to know the printer also. The books are said to be prepared like this: after being printed, the sheets are hung up in the chimney in order to make them look old. They are now burnt in parts and covered with soot. When they have assumed as dark a colour as seems to be suitable, the soot is wiped off and the papers are nailed together into a book and taken out into the desert, where they are buried in the sand. Having remained there for some time they are "discovered" and brought out into the market in order to—make fools of the Europeans. Examine the paper in the books and you will find it quite of the same kind, as is produced in Khotan now-a-days; and the white spots in it here and there point it out not to be of an ancient date."

With regard to the three books, purchased by Mr. Bäcklund as related above, he informed me in a subsequent letter, dated the 10th October, 1898, that "as he considered them useless, he handed them over to an English traveller, Mr. R. P. Cobbold;" and that "soon after having got rid of them, a man offered him some very fresh prints, which he refused to take." The books thus obtained by Mr Cobbold afterwards passed into the possession of the British Museum, and I shall have occasion to refer to them again.

I quote these letters so fully, in order that the case of the forgery-theory may be stated quite fairly. To Islam Akhūn's behaviour and the servant's denunciation too much force should not be attached. They are nothing more but what may be expected under the circumstances. The points enumerated by Mr. Bäcklund are those deserving consideration. And here it should be noted, in the first place, that they only refer to Khotanese block-prints, not to manuscripts, and secondly, that they are based on a very limited number of specimens. Mr. Bäcklund admits—what indeed is obvious—that forgery presupposes the existence of a genuine original which was imitated. The suggestion is that a distorted imitation of this original was made purposely, and that that fact accounts for the mystery of the scripts. This does not seem a plausible hypothesis. No intelligible original, such as the suggestion assumes to have existed, has been produced; if it existed, the finder, surely, would have disposed of it first, and when his genuine stock was exhausted, he might then have had recourse to forgery to replenish his stock in trade. Something of this kind, indeed, as I imagine and as I shall presently

show, has probably actually happened ; but not in the way required by the hypothesis referred to. Moreover, as my detailed description of the block-prints shows the varieties of the (*ex hypothesi*) forged script are so numerous and so intricate as to require the allowance of a much longer time for their elaboration, than has actually passed since forgeries can have commenced, at most about ten years ago. The trade in forged prints could only have arisen with the advent of modern European travellers. The earliest of these is General Prjevalski who visited Khotan in 1885, and at that time these books were unknown and unthought of. The first objection, mentioned by Mr. Bäcklund refers to the cheap price of the books. This is a point which may be argued either way, and is usually considered to speak rather in favour of genuineness. Mr. Bäcklund obtained his three books for Rs. 7 ; but for some block-prints in the British Collection a rather good price has been paid. For the book G. 9 (Eighth Set) Rs. 40 were paid ; for the book G. 8 (No. VI in the Seventh Set) Rs. 45 ; for the two books in M. 5, Rs. 40 ; for the two books in M. 6, purchased from Badruddin, Rs. 40 ; for the four books in M. 6, purchased from Mr. Högberg together with a lot of antiques, Rs. 200. On the other hand, for the two sets of nine books in M. 7 and eight books in M. 8, only Rs. 40, each set, were paid ; and for the two books in M. 4 (*plus* sundry antiques) and the two books in M. 9 (also *plus* sundry antiques) even only Rs. 11-3 and Rs. 20 respectively. The fact is that latterly (early in 1898) when suspicion had once been aroused regarding the genuineness of these books, which tended to interfere with their saleableness, the dealers found it advisable to lower their prices. This is a question of demand and supply, and has little direct bearing on that of genuineness. It is quite possible that a large store of genuine books may have been discovered somewhere in the desert.

The second objection refers to the supposed freshness of the books. I have examined 44 books and my observations do not altogether agree with those of Mr. Bäcklund. There are distinct marks of old rust on the guards and beneath them in the case of some books ; in others the corners are by no means "quite square," but irregular and even round ; the leaves of some books (outside as well as inside) are in a very damaged condition and rotten, and show the dirty signs of having been handled ; some books are printed on a kind of paper which is quite unknown in Khotan.

The probability seems to be that latterly when the store of genuine old books gave out, an attempt was made to produce new ones by imitating some of the old genuine ones. The commencement of this attempt would seem to fall in 1897 ; and the books offered to Mr.

Bäcklund may have been part of the result of this attempt. Mr. Bendall wrote to me on the 15th July, 1898, "I have been comparing your pamphlet about the xylographs from Central Asia⁶ with a block-print recently acquired by the British Museum from Lieut. Cobbold. What is curious is that it is a duplicate of the book figured on your first Plate, but does not contain the writing between the two columns of print to which you call attention." This observation of Mr. Bendall very possibly gives the key to the situation. If there exist any forgeries, they are, in all probability, duplicates of genuine books that have been discovered. The preparation of a duplicate is probably well within the capability of a modern Khotanese forger, but the hypothesis that he is capable of inventing not only one but several scripts, and of intricate, but self-consistent systems of their arrangement in books, and finally of binding them after a method, quite unknown in Khotan at the present day, contains more elements of improbability than the hypothesis of the genuinenesses of the books.

The manufacture of duplicate block-prints postulates the existence of old blocks from which new ones may have been prepared, and from which (or from their new facsimiles) the modern reprints (if there are any) must have been made. I have shown in the description of the First and Second Sets, how utterly improbable it is that the blocks of type can have been invented by the forger. The overwhelming probability is that sets of old blocks of type have been discovered in the Takla Makan, and from these reprints may have been made. But moreover, actual old books printed from those blocks and representing each of the nine Sets must have been found. For the systems of printing and binding which are used in the books are unknown in Khotan in the present day, and imitations could not have been made, unless models had been found.⁷ Add to this not only that most of the books, though printed (as I believe) on Khotanese paper, are printed on varieties of it (*viz.*, IIIa b c) which are not known in Khotan at the present day; but also that there are others (as those in the Eighth and Ninth Sets) which are printed on paper of a kind which is not Khotanese at all. That some of the block-print books are printed on paper of the variety III d is quite true; but this fact, by itself, does not prove forgery; for it cannot be doubted (considering Oriental conservative habits)

⁶ Published in the *Proceedings* of the Asiatic Society of Bengal, for 1898.

⁷ An alternative hypothesis would be that no blocks have been found, but only books; and that from these books new blocks have been prepared, and then employed to print new books. The prints, however, as shown by measurements, are so accurate facsimiles, that considering the inveterate inaccuracy of Orientals this hypothesis of the imitation of new blocks from old prints seems excluded.

that the particular process of paper manufacture which is still followed in Khotan may have been in vogue there for centuries before. At all events, it cannot well be supposed that those books, which are printed on old paper of a kind never known, or no more known in Khotan, are modern Khotanese forgeries. If they are modern forgeries, they must have been forged somewhere else than Khotan; and this complicates the theory of forgery with additional improbabilities. Further, some of the books, admittedly or probably written on paper of Khotanese manufacture, exhibit peculiarities which it may safely be said, would not have occurred to a forger to introduce. I refer, for example, to the sketches of heads, which are found in books No. I of the Fourth Set and No. V of the Seventh Set,⁸ to the occurrence of the recensious *Ig* and *Ih* in book No. VIII of the Fifth Set, and to the Pōthī with its entirely Indian arrangement. Such books cannot well be forgeries.

Further, forgeries may be admitted to be quite possible in the case of block-prints, in the reprinting of which from genuine old blocks there is no serious difficulty. But it is different with manuscripts; and let it be noted, that there are not only fragments of manuscripts, but whole books—some of them fairly large books—of manuscript. The difficulties of forging these would be enormous. In this case there are no duplicates. There are, indeed, a fair number of them in the collection; but they are all different from one another. It would mean that they had all been forged, within a comparatively short time, from no models whatsoever. Some are written on paper which is not Khotanese at all; others are on paper, similar to that of some of the block-prints, but of a variety now obsolete (*viz.* IIIa). Some are bound in the Indian fashion of a Pōthī; others in the Khotanese fashion with copper pegs or twists of paper. These manuscripts cannot be forgeries; and *pro tanto* they make against the hypothesis of forgery in the case of the block-prints.

The mystery of the scripts—so many, and so intricately arranged—is, no doubt a difficulty. But to solve it by the hypothesis of forgery is only to substitute one riddle, and a harder one, for another. How can Islām Akhūn and his comparatively illiterate confederates be credited with the no mean ingenuity necessary for excogitating them? Moreover the riddle of one of the scripts, which occurs in two of the manu-

⁸ These sketches are not easily observable. The books were some months in my hands, before I discovered them, and I did so only on carefully examining them page by page. Their existence does not appear to have been known either to Mr. Macartney or to Islām Akhūn who sold them to him. It does not seem probable that a forger would have omitted to draw the buyer's attention to the existence of such a valuable peculiarity in his own handiwork.

script books written on Khotanese paper (variety IIIa), has been solved. In January 1898 I showed these books to Sir Charles J. Lyall, and he agreed with me that the script seemed to resemble Pahlavi and to be in verse. In December last, when I had an opportunity of showing them to Dr. Aurel Stein, who has made Iranian scripts and languages a special study, he at once recognized the Pahlavi script in verse. He even read some portions of it, though, of course, as will be readily understood by those who know the difficulties of reading unknown texts in Pahlavi, it was not possible for him, at such short notice, to determine what the purport of the text might be.

Finally to add a minor point, book No. VI of the Second Set, is a mere fragment. One cannot easily conceive why a forger should sell a portion of a forged book of a kind, of which he could with comparative ease fabricate a large number of complete copies; while it is perfectly natural that he should dispose of a genuine old book, even if he had found or secured only a portion of it.

To sum up, the conclusion to which, with the present information, I have come, is that the scripts are genuine; and that most, if not all, of the block-prints in the Collection also are genuine antiquities; and that if any are forgeries, they can only be duplicates of others which are genuine, and must be found among the books of M. 8 and M. 9 which are written on the III*d* variety of Khotanese paper. By duplicates, I do not mean such in point of size or variety of paper, but with reference to the arrangement of the impressions of the block, or blocks, on the pages. The determination of whether or not there are any such duplicates in the British Collection, must remain over for a future opportunity of examination of the block-prints.

In addition to the block-printed text, two books (No. IV of the First Set and No. III of the Second Set) contain additional small legends, inserted in blank intervals between the repetitions of the text. Their letters are larger than, and their direction sometimes different from, that of the surrounding text. They have every appearance of not being printed but written by hand. Their shape is irregular, and their ink is darker and does not look as if imprinted from type.

On the whole the block-print books are in a fairly good state of preservation. Some of them are much torn or otherwise damaged. Many of them bear stains of oil or other fatty substance; some also seem to have been exposed to the action of fire or water, as their leaves are found more or less strongly singed or rotten.

**State of
Preservation.**

FIRST SET. (Plates V–VIII, XI and XIII.)

This set comprises eight copies, namely, one pōthī and seven books. Its text is also found on three pages of book No. II of the Second Set; and some portions of the text of it are also found on one page of book No. VIII of the Fifth Set and in book No. III of the Sixth Set.

The text consists of five portions, which comprise 5, 2, 7, 2 and 4 lines respectively, and which I shall distinguish as the formulas A, B, C, D and E. The total text, therefore, comprises 20 lines of type. Each line appears to contain from 10 to 13 letters.

The entire text of 20 lines, with the five formulas, arranged in the order above given, is found in four books (Nos. I, III, IV, V). One book (No. VI) and the pōthī (No. II) contain only the formulas A, C and E; with this difference, however, that in book No. VI the three formulas are arranged connectedly in the same order as in Nos. I, III, IV, V, only leaving blank intervals in the place of B and D; while the pōthī gives the three formulas A, C and E independently of one another, in no connected series and on different pages. Of the remaining two books, one (No. VII) gives only a portion of formula A, *viz.*, lines 1, 2, 4 and 5, omitting line 3; while the other (No. VIII) gives only a portion of formula C, *viz.*, lines 9, 11, 13 and 14, omitting lines 8, 10 and 12. In book No. III of the Sixth Set the same three formulas are found, but not in any connected series; *viz.*, (1) the formula A, mutilated as in No. VII, (2) the formula C, as in No. VIII, (3) a portion of formula E, *viz.*, lines 17, 18, 19, omitting line 20. The two formulas B (lines 6 and 7) and D (lines 15 and 16) have never been found by me separately from the entire text. These formulas, therefore, are found only in the books Nos. I, III, IV, V.

Accordingly the text of the First Set exists in the following eight forms or recensions, denoted by *Ia*, *Ib*, *Ic*, *Id*, *Ie*, *If*, *Ig* and *Ih*.

(1) The full text (*Ia*) of 20 lines, consisting of the formulas A, B, C, D and E, in a connected series. This is found in books Nos. I, III, IV, V; also in book No. II of the Second Set.

(2) The shorter text of 16 lines (*Ib*), consisting of the formulas A, C and E, with proportionate blank spaces for B and D; the whole in a connected series (as in *Ia*). This is found in book No. VI.

(3) The three formulas A (*Ic*), C (*Id*), and E (*Ie*), given separately, and forming no connected whole. In pōthī, No. II, also in book No. VI.

(4) The formula A (*If*), in a mutilated form, *viz.*, lines 1, 2, 4, 5. In book VII; also in book No. III of the Sixth Set.

(5) The formula C (*Ig*), in a mutilated form, *viz.*, lines 9, 11, 13, 14. In book No. VIII; also in book No. VIII of the Fifth Set and in book No. III of the Sixth Set.

(6) The formula E (*Ih*), in a mutilated form, *viz.*, lines 17, 18, 19. In book No. III of the Sixth Set.

I have carefully measured these various recensions of the text. The measurements were made vertically, horizontally and diagonally across the prints. I measured, in this manner, the whole text in all its forms, as well as groups of lines, single lines, half-lines, groups of letters and single letters. The result was invariably the same; the corresponding measures in the several books exactly agree, in whatever variation they may be taken. Thus measuring the recension *Ia*, from the top of the last letter of the first line to the bottom of the last letter in the last line (both on the left-hand side of the column, see Plate V), the distance is exactly 6 inches. Measuring similarly, the distances in the formulas A, C, and E are $1\frac{2}{5}$, $1\frac{9}{10}$ and $1\frac{1}{6}$ inches respectively; and again measuring similarly, the width of each of the intervals between A and C, and between C and E (within which the two formulas B and D are placed) is $\frac{3}{4}$ of an inch. Measuring the recension *Ib*, exactly the same result is obtained. This recension, as has been already explained, consists of the formulae A, C and E, with blank spaces for B and D. The distance from the top of A to the bottom of E, including the blank spaces, is exactly 6 inches; the width of each blank space is $\frac{3}{4}$ of an inch; and the widths of A, C and E are $1\frac{2}{5}$, $1\frac{9}{10}$ and $1\frac{1}{6}$ inches respectively. The widths of the latter three formulas or the three recensions *Ic*, *Id*, *Ie* (see Plates VI and VII), when they occur separately in the Pōthī (No. II), are precisely the same; and the same is the case with them in their mutilated forms *If*, *Ig*, *Ih* (see Plates XI and XIII). Thus in the recension *If*, a blank space is left, for the omitted line 3, between the lines 2 and 4; and measuring from the top of line 1 to the bottom of line 5, the distance is, as before, exactly $1\frac{2}{5}$ inches. It is evident, therefore, from these comparative measurements that the xylographs of the first set were all printed either from the very same block, or from a number of blocks with facsimile type.

It can easily be shown that the latter alternative is the true one, and that in all probability eight blocks have been employed in printing the xylographs of the first set. A block was prepared in this wise. From the smoothed surface of a rectangular (oblong) piece of wood the type was cut out in relief by counter-sinking the background. Along the edge of the piece of wood a thin ridge was also left in relief, enclosing the type and the counter-sunk background on all four sides. In order to take an impression the surface of the type was inked. Of course, the ridge was also inked, but this appears to have been done very imperfectly, for in no case did it give more than a very intermittent

impression, and in most cases it gave no distinct impression at all. Traces of the enclosing lines, made by the ridge, may be seen on Plates V, VII, XI and XIII. It is obvious that these enclosing lines afford a ready means for identifying a block. Sufficient of their traces remain to render it nearly certain that there was a separate block for each of the eight recensions of the text.

The blocks used for recensions Ia and Ib had the same dimensions. They were long, narrow slabs of woods, measuring $6\frac{1}{2}$ by $1\frac{1}{16}$ inches. There were no blocks of twice that width bearing two columns of type. This is proved by the fact, that when two impressions are seen side by side, their edges frequently touch or even overlap one another, showing that the impressions were taken separately one after the other, and not very carefully. Moreover occasionally when the impressions were taken wider apart, two parallel enclosing lines may be seen between the inner margins of the two prints. On the other hand, it is not probable that both recensions Ia and Ib can have been printed off the same block. For the blank spaces (for lines 6, 7, 15, 16) in Ib are quite clean: smudges would have been unavoidable from the old inked surface, even if the omitted lines had afterwards been left uninked. Moreover, though the surface of the blank spaces is clean, the enclosing lines can occasionally be seen continuing on both sides, and thus showing that the entire surface of the block had been inked. It follows that for recension Ib a separate block must have been used, in which the surfaces of the two blank spaces had been counter-sunk in order to prevent their being inked. Further it is not probable that the recension Ib can have been printed by using in combination three smaller blocks of type, containing the formulas A, C and E respectively. For (1) the width of the blank interval is always exactly the same ($\frac{3}{4}$ of an inch), (2) the enclosing lines right and left run perfectly straight, (3) there is never any trace of any top and bottom enclosing lines of the three blocks between the lines of type. These three facts (especially in combination) seem quite incompatible with the use of three blocks to print one text.

There were three blocks, one for each of the recensions Ic, Id and Ie. They must have measured about $1\frac{2}{3} \times 1\frac{1}{16}$, $2\frac{1}{3} \times 1\frac{1}{16}$, and $1\frac{2}{3} \times 1\frac{1}{16}$ respectively, as may be calculated from the slight traces of the enclosing lines discernible in a few places (see Plates VII, XI, XIII). The blocks for Ic and Ie must have been of the same or very nearly the same size. The recension Id, (*i.e.*, formula C) is printed six times on a page of the pōthī (see Plate VI), being arranged in two columns of three impressions each. That the page was not printed off two blocks, each containing a whole column of type, or off one block containing a double column of type, is evident from the fact that the six impressions do not keep in

straight line, but approach or overlap one another, both horizontally and vertically. The same remarks apply to recensions *Ic* (A) and *Ie* (E), each of which is printed eight times on a page of the Pōthī (see Plates VI and VII).

The two recensions *If* and *Ig* must have been printed from blocks of the same size as those for the recensions *Ic* and *Id*. The two pairs of recensions (*If* and *Ic*, *Ig* and *Id*) cannot have been printed from identical blocks; for the same reasons which (as explained above) show that the two texts *Ia* and *Ib* cannot have been printed off an identical block. The case is not quite so clear with regard to the recension *Ih* (formula E); for I have noticed occasionally smudges on the blank space corresponding to the omitted line 20. They look like very indistinct traces of the letters of that line, suggesting that its type existed on the block but had not been inked. In the blocks for *If* and *Ig*, the type of the omitted lines does not seem to have existed, the whole space corresponding to those lines being counter-sunk, excepting the ridge along the edges, traces of which ridge are still occasionally discernible (see Plate XI).

For the formulas B and D (that is, the lines 6 and 7, 15 and 16) there do not seem to have existed any separate blocks. So far as the evidence, at present available, goes, those two formulas were never printed separately, but only existed on the block for recension *Ia*.

The Pōthī is undoubtedly a genuine ancient relic. It possesses every mark of antiquity in point of general appearance and condition. It is unique in its form of an Indian *pōthī*. Its paper, which is hard, rigid, brittle and discolored, and its print which is faded, suggest considerable antiquity. In point of material and texture its paper is very similar to, if not identical with, the paper of the variety *IIIb*, on which many of the books are written, but it differs distinctly in colour, being more of a dirty greyish-brown, than of the dirty yellowish-brown of the books. With reference to this Pōthī Sir A. C. Talbot, in his demi-official letter, No. 5972, dated the 23rd October 1897, writes that "it might be of interest to note that the book enclosed between the rough wooden covers bears a strong resemblance to the religious manuscripts still used in the Hemis and other large monasteries of Ladakh; and that among the metal objects sent⁹ is what seems to be an old iron arrow-head, very like those with which the arrows in the treasure-rooms at Hemis are tipped. Possibly the excavation was made from the site of some former Buddhist monastery of which, according to Remusat, many must have existed in, and around, the Takla Makan." The evident antiquity of the Pōthī is

⁹ This arrow-head as well as the Pōthī were in the consignment M. 4.

a point of great importance ; for it is a guarantee of the genuineness of the text. Whatever degree of suspicion may attach to some of the books, they can only be forgeries in a modified sense. Their paper and the actual print may be modern, but their impressions must have been taken from ancient blocks. For, as I have shown, the blocks from which the books and the pōthī are printed, show identical sizes and facsimile types. It is almost demonstrable, therefore, that a set of ancient blocks of type must have been found, from which the books, if any are really modern fabrications, have been printed. The three blocks (for recensions *Ic*, *Id*, *Ie*, or the formulas A, C, E) from which the Pōthī was printed, must certainly have been found. It may be suggested that, with the help of these three blocks, the blocks for the other recensions might have been fabricated. But this would not account for the existence of the formulas B and D (lines 6, 7 and 15, 16) in recension *Ia*. It is very improbable that a forger, though he might have omitted portions of an existing text, would have gone beyond his pattern and invented new lines of type. The probabilities, therefore, decidedly are for the genuineness of the block of recension *Ia*. The preparation of facsimile blocks, from existing patterns, is not at all beyond the capabilities of a clever imitator ; and the genuineness of the blocks for the recensions *Ib*, *If*, *Ig* and *Ih*, which are only differentiated from those for *Ia*, *Ic*, *Id* and *Ie* by the omission of certain lines of type, might, therefore, be questioned ; but the occurrence of the recensions *Ig* and *Ih* on one page of book No. VIII of the Fifth Set (see Plate XI) renders the hypothesis extremely improbable. Such a solitary and casual insertion of an alien text in a book entirely devoted to a different text would hardly have occurred to a forger. Moreover the state of preservation of that book seems to stamp it as genuinely antique. On this point, however, further evidence is required. If once the writing is deciphered, and its purport understood, that knowledge may very possibly decide the question of genuineness. If it should be found that by the omission of a portion of it, the text is rendered unintelligible, that result might seem to prove that the blocks for the mutilated texts *Ib*, *If*, *Ig*, *Ih* are the work of an ignorant forger ; for, at the present day, neither the writing nor the language of these block-prints is understood in Khotan. On the other hand, it must be remembered that there is good reason to suppose that some of the books were not intended for intelligent reading, but merely for mechanical use.

As regards the determination of the question of what is the beginning and the end of the text, there is some indication given by the arrangement of the text in Book No. I. This book shows two columns on each page (see Woodcut No. 11), each column consisting

of two impressions of the full text (or recension Ia). These impressions are invariably¹⁰ placed so as to turn the same side towards the upper and lower edges of the book. It follows that that side of the impression (as shown in Plate V) must be its top or the beginning of the text; and that the feet, or ends, of the two impressions meet in the middle of each column and of the page. For it is natural to assume, that the reader was intended to commence reading at the top of the page, and not in its middle. Of course, on the supposition of a forgery, this conclusion would loose much of its force, as an ignorant forger might by chance have misplaced the impressions; but the peculiar placement of the imprints is so regular as to render such an hypothesis very improbable. Moreover there are other indications, such as the texture of the paper (see the General Remarks on paper), which make against Book No. I being a forgery.

No. I. Book. (Plate V.)

Belongs to M. 6. Acquired from the Rev. Mr. Högberg. Size, 12×9". Number of forms, 18; but first form is incomplete, the first blank leaf is missing: print accordingly commences on second page (properly fourth page). Moreover second and penultimate forms are double, consisting each of two folded sheets, one placed within the other, and, therefore, having each four leaves or eight pages. Accordingly number of leaves, 39. Paper, variety IIIa; fairly clean. Riveted with three copper pegs.

Contains recension Ia, printed in two columns on each page; each column consisting of two impressions, placed foot to foot, the upper one being complete (20 lines), the lower, more or less incomplete (as a rule 15 or 16 lines) owing to want of space. (See Woodcut No. 11). The foot-to-foot arrangement of the text is almost invariable. There are only four exceptional pages, on which it stands head to foot. The two varieties of arrangement may be represented thus:—

Ordinary, on 62 pages. Exceptional, on pp. 2, 46, 65, 75.

(1) $\begin{cases} abc & abc \\ def & def \\ ghi & ghi \end{cases}$

(2) $\begin{cases} \text{y}b & \text{y}b \\ f\text{a}p & f\text{a}p \end{cases}$

(1) $\begin{cases} def & def \\ ghi & ghi \end{cases}$

(2) $\begin{cases} abc & abc \\ def & def \\ ghi & ghi \end{cases}$

The second variety is obviously due to mere carelessness on the part of the printer. The first variety, which occurs 62 times, is clearly

¹⁰ There are only a very few, apparently accidental, exceptions, which are noted in the detailed description.

intentional. Its object evidently is to make it possible to read the book in the way previously explained in the General Remarks. The regularity of the arrangement seems to indicate that this book was really intended to be properly read. If it had been merely intended for mechanical use by turning the leaves, there would have been no necessity for observing any such strict regularity. It may be further noted that discounting the four exceptional and erroneous pages, one end of the text (indicated by *ghi* in the above diagrams) is always placed in the middle of the page, while the other end is invariably found at the top of the page, in whichever way the book is held. This circumstance seems to prove clearly, which line of the text must be considered its beginning.

The text is repeated four times on every page. There are only two exceptions, *viz.*, pages 48 and 63. On page 48 there are only two impressions, while page 63 has only one. The remainder of the space is occupied with legends in an apparently different alphabet, but which may also be only a written or "current" form of the printed one. They are shown on Plate V, and are evidently not printed from a block, but written by hand.

No. II. Pōthī.

Belongs to M. 4. Brought from Khotan, together with No. VI and other objects; the whole purchased for Rs. 11-3-2. Size, $8\frac{1}{2} \times 4\frac{7}{8}$ inches.¹¹ Number of forms 45. Leaves of a curious, bottle-shaped form, see Plates VI-VIII; reminding one of the manuscript book found under the skull (see Introduction, pp. xxi). Bound, in the Indian fashion, between two rectangular (not bottle-shaped) blocks of wood, measuring $8\frac{1}{2} \times 4\frac{3}{4} \times 1$ inches, and rough and uneven on the outer, but planed on the inner surfaces; and exceedingly dry and light of weight. Riveted like an Indian copper-plate grant, on the left-hand, narrow side of the oblong, by means of one copper peg, which passes through the "neck" of the bottle-shaped leaves. Paper, of a dirty greyish-brown color, and hard, stiff, and brittle and in many leaves badly fractured; also with many fatty stains and occasional burns. The whole appearance very suggestive of genuine antiquity.

Contains recensions *Ic*, *Id* and *Ie*, printed separately on different pages, and arranged in two columns, so that there are six impressions of recension *Id* (formula C), and eight impressions each of recensions *Ic* and *Ie* (formulas A and E) on a page. Recension *Id* (C) occurs most frequently; *viz.*, on forms 1, 2, 6, 7, 9-12, 13 (pp. 2, 3, 4), 14-18, 20-24, 25 (pp. 1-3),

¹¹ The middle of the pages of the pōthī slightly projects beyond the edges of the blocks.

27, 28, 29 (pp. 2, 3), 30, 35, 36, 38–42, 44 and 45. Recension Ic (A) comes next, on forms 3, 4, 8, 19, 25 (p. 4), 26, 29 (pp. 1, 4), 31–34 and 43. Recension Ie (E) only occurs on the forms 5, 13 (p. 1), and 37.

As a rule, the lines of print run parallel with the narrow side, and accordingly the columns run parallel with the longer side of the page (see Plate VI). There is only one exception in which the lines of print run parallel with the longer side, and accordingly the columns (which in this case are four in number) with the narrow side of the page (see Plate VII); this is the first page of the 33rd leaf. On two pages there is an altogether exceptional arrangement, which may be shown thus:¹²—

Leaf 13, page 1.	Leaf 33, page 3.
o o e e e	o o
o o	ccc ccc o o
o o e e e	o o
e e e e e e	o o
e e e e e e	ccc ccc o o
	o o

These three exceptional pages would seem to have been trial pages, to find out the best way of disposing the impressions on the page.

As a rule the columns of the text are arranged so that they stand turned towards the inside (*i.e.*, the neck-like, peg-hole side of the page), either head to head or foot to foot. There are altogether 86 pairs of printed pages, 43 pairs inside and 43 pairs outside the “forms.” Out of these 86 pairs, 78 have the columns of text thus arranged, *i.e.*, head to head or foot to foot. In the remaining eight pairs, the foot of the column on one page adjoins the head of the column on the other page; and the arrangement on these exceptional pairs is clearly due to carelessness on the part of the printer. Again among the 78 pairs which have the normal arrangement, 37 have the heads of their columns turned inside, *i.e.*, towards the peg-hole side, while 41 have the feet of their columns turned inside.¹³ The pairs are nearly equally

¹² *ccc* denotes recension Ic, and *eee* denotes recension Ie.

¹³ In terms of “forms” the distribution stands thus. There are 45 forms. In 2 forms (first and last) only one page is printed. Of the remaining 43 forms, 14 have the head of the text turned inside; 17 have it outside; of 6 others, 2 have the head inside on their interior side, but outside on their exterior side, and 4 have the head outside on the interior, but inside on the exterior; of the remaining 4 forms, 2 have the head inside on the interior and no order on the exterior, while 1 has the head outside on the exterior, but no order on the interior side, and 1 is exactly the reverse of the last-mentioned; (14+17+6+4=41). Obviously the last-mentioned 10 forms (6+4) might be folded the other way, and then would show the exact reverse of their present condition. The remaining two forms have no order, either on the interior or exterior side (41+2=43).

divided between the two systems. But what is puzzling is that the pairs of these two systems, in their present succession, do not follow in any intelligible order (*e.g.*, first the 37, and afterwards the 41, or *vice versa*), but they succeed one another pell-mell. If either system had been followed throughout, or if the whole of the pairs of one system had followed the whole of the pairs of the other system, an intelligible order of reading would have resulted; one might have read first one set of alternate pages, and then turning the book right round, one would have been able to read the other set of alternate pages. As it is, the condition of the book suggests that it was not really intended to be read intelligently, but to have its leaves turned mechanically. As the leaves, however, are not numbered, and their serial succession is not fixed, it is possible that the leaves do not now stand in their original order. The latter might have been (say) first 41, then 37, and the break of uniformity might have been due to a *lapsus* on the part of the printer.

No. III. Book.

Belongs to M. 6. Acquired from the Rev. Mr. Högberg. Size, $8 \times 5\frac{1}{2}$ inches. Number of forms 22. Paper, variety III*b*. One leaf (23rd) damaged by two holes. Extensive fatty stains on many pages. Riveted with three copper pegs.

Contains recension Ia, printed in two columns on each page and standing upright and reversed on alternate pages; thus upright on pages 4 and 6, but reversed on pages 5 and 7, and so forth.

No. IV. Book.

Belongs to M. 5. Size, $11\frac{1}{2} \times 8''$. Number of forms, 30, all cut into separate leaves. Paper, variety III*b*. Twenty leaves, more or less damaged by holes, evidently due to singeing. Many pages soiled with extensive fatty stains. Riveted with three copper pegs.

Contains recension Ia, printed in two columns on each page, with a wide interval; each column consisting of two impressions; accordingly the full text, four times on each page; but reversed on alternate pages; see Woodcut No. 11. The arrangement of the columns is similar to that in No. II, Pōthi. As a rule, they stand either head to head, or foot to foot, on any pair of juxtaposed pages. There are altogether 57 such pairs. Taking their present order of succession, on 19 of them the columns stand head to head, and on 29, foot to foot; while on the remaining 9 this arrangement is not observed, the position being head to foot. Seeing, however, that the forms are all cut into separate leaves, those leaves on which the exceptional nine pairs stand, may be easily arranged so as to preserve the

regular arrangement. If this is done, we obtain 22 pairs head to head, and 35 pairs foot to foot (total 57). Each of these two sets may easily be read by observing the principle, previously explained, of reading by alternate pages; and the break of uniformity between the two sets may be due to inadvertence on the part of the printer.

Within the intervals, in the centre of the page, additional small legends are inserted, consisting of 4 to 7 letters, double the size of the text, and running at right angles to the latter. They are not seen on every page, but as a rule only on the two outside pages of each form; thus on pages 5 and 8, 9 and 12, and so forth. On eight forms (*viz.*, 5, 8, 14, 16, 21, 24, 26) they occur on the two inside pages; thus on pages 18 and 19, 30 and 31, and so forth. In one form, the 22nd, they are omitted altogether. In the initial and final forms (on which three pages are blank), of course, they occur only once; *viz.*, on pages 4 and 117.

No. V. Book.

Belongs to M. 3. Purchased in July 1897 from Badruddin, an Afghan merchant in Khotan. Size, $11\frac{1}{4}$ by 8 inches. Forms all cut through at the back with a blunt instrument; hence all leaves separate, numbering 39; initial leaf missing. Paper, variety IIIb. Extensive fatty stains on most pages; many damaged by burns. Bound with three twists of paper.

Contains recension Ia, printed on each page in one horizontal column above and three vertical columns below, making four impressions on each page (see Woodcut No. 12). The three vertical columns always stand in the same position towards one another, but vary in their position towards the horizontal column, having sometimes their head, sometimes their foot towards it. The position of the horizontal column varies in having sometimes its head, sometimes its foot turned to the outer margin of the book. The whole yields a great variety of arrangements, in the choice of which no order is discernible. It is impossible, therefore, to read the book in any intelligent order, and it would seem to be intended for mere mechanical use.

No. VI. Book.

Belongs to M. 4. Brought from Khotan, together with No. II, *q. v.* Size, $11\frac{1}{2} \times 4\frac{1}{4}$ ". Number of forms, 31. One blank leaf is torn off, and missing; hence only 63 leaves. Total of printed pages 126 instead of 124; because, contrary to the usual order of these books, the print commences on the 3rd page instead of the 4th page; similarly printing continues to the ante-penultimate page, instead of stopping, as usual, on the ante-ante-penultimate page. Paper, variety

IIIa. Extensively soiled with fatty stains, and damaged by burns. Bound with three twists of paper.

Contains recension *Ib*; also recensions *Ic*, *Id*, *Ie*, printed in two columns on every page. The arrangement of the text of these recensions on the pages is of the wildest kind; there is no discernible order whatsoever. The following diagrams of 19 different arrangements, which I have noticed, will give a good idea of the disorder. Recension *Ic* (formula A) is indicated by *aaa*, *Id* (C) by *ccc*; *Ie* (E) by *eee*; and *Ib* by the corresponding (bracketed) combinations of these three notations. The latter are represented in the same direction in which the recensions are printed in the book.

I. (pp. 1, 2.) ¹⁴	II. (pp. 3, 6.)	III. (p. 4.)	IV. (pp. 5, 8, 9, 15, 18, 19, 22, 24, 25, 27, 35, etc.)
$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{ccc} & \text{eee} \\ \text{eee} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{eee} & \text{aaa} \\ \text{eee} & \text{ccc} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \end{array} \right.$
$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{aaa} & \text{eee} \\ \text{ccc} & \text{eee} \\ \text{eee} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{aaa} & \text{eee} \\ \text{ccc} & \text{eee} \\ \text{eee} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \end{array} \right.$
V. (pp. 7, 10, 16, 17, 20, 21, 23, 26, 36, etc.)	VI. (p. 11.)	VII. (p. 12.)	VIII. (p. 13.)
$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \end{array} \right.$	$\begin{array}{ll} \text{aaa} & \text{eee} \\ \text{aaa} & \text{eee} \\ \text{aaa} & \text{eee} \\ \text{aaa} & \text{eee} \end{array}$	$\begin{array}{ll} \text{eee} & \text{eee} \\ \text{eee} & \text{eee} \\ \text{eee} & \text{eee} \\ \text{eee} & \text{eee} \end{array}$	$\begin{array}{ll} \text{eee} & \text{eee} \\ \text{aaa} & \text{aaa} \\ \text{aaa} & \text{aaa} \end{array}$
$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \end{array} \right.$	$\begin{array}{ll} \text{aaa} & \text{eee} \\ \text{aaa} & \text{eee} \end{array}$	$\begin{array}{ll} \text{eee} & \text{eee} \\ \text{eee} & \text{eee} \end{array}$	$\begin{array}{ll} \text{eee} & \text{eee} \\ \text{aaa} & \text{aaa} \\ \text{aaa} & \text{aaa} \end{array}$
IX. (p. 14.)	X. (p. 28.)	XI. (p. 29.)	XII. (p. 30.)
$\begin{array}{lll} \text{eee} & \text{eee} & \text{eee} \\ \text{eee} & \text{eee} & \text{eee} \\ \text{eee} & \text{eee} & \text{eee} \\ \text{eee} & \text{eee} & \text{eee} \end{array}$	$\left\{ \begin{array}{ll} \text{aaa} & \text{eee} \\ \text{ccc} & \text{eee} \\ \text{eee} & \text{eee} \\ \text{aaa} & \text{eee} \\ \text{ccc} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{aaa} & \text{aaa} \\ \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{eee} & \text{eee} \\ \text{ccc} & \text{ccc} \\ \text{eee} & \text{eee} \\ \text{eee} & \text{eee} \end{array} \right.$

¹⁴ The numbers refer to printed pages. Thus printed page 1 = page 3 of the book.

XIII. (pp. 31, 34.) XIV. (pp. 32, 33.) XV. (p. 83.) XVI. (p. 113.)

$\left\{ \begin{array}{ll} aaa & \text{əəə} \\ ccc & \text{ɔɔɔ} \\ eee & \text{vʋv} \end{array} \right.$	$\left\{ \begin{array}{ll} \text{əəə} & aaa \\ \text{ɔɔɔ} & ccc \\ \text{vʋv} & eee \end{array} \right.$	$\left. \begin{array}{ll} ccc & ccc \\ ccccc & eee \\ ccccc & aaa \end{array} \right\}$	$\left. \begin{array}{ll} aaa & eeeee \\ aaa & eeeee \\ aaa & eeeee \\ aaa & eee \end{array} \right\}$
$\left\{ \begin{array}{ll} aaa & aaa \\ ccc & ccc \end{array} \right.$	$\left\{ \begin{array}{ll} aaa & aaa \\ ccc & ccc \end{array} \right.$	$\left. \begin{array}{ll} ccc & ccc \\ eee & eee \end{array} \right\}$	

XVII. (p. 114.) XVIII. (p. 115.) XIX. (p. 116.)

$\left. \begin{array}{ll} eee & ccc \\ eee & eee \end{array} \right\}$	$\left. \begin{array}{ll} eeeee & ccc \\ eeeee & eee \end{array} \right\}$	$\left. \begin{array}{ll} aaa & eee \\ aaa & eee \\ vʋv & vʋv \end{array} \right\}$
$\left. \begin{array}{ll} eeeee & \text{əəə} \\ eeeee & \text{ɔɔɔ} \\ eeeee & vʋv \end{array} \right\}$	$\left. \begin{array}{ll} eeeee & \text{əəə} \\ eeeee & \text{ɔɔɔ} \\ eee & vʋv \end{array} \right\}$	$\left. \begin{array}{ll} vʋv & vʋv \\ vʋv & \text{əəə} \\ vʋv & \text{əəə} \end{array} \right\}$

Fourteen of these variations occur within the first 36 printed pages alone. It is obvious that with such a planless arrangement of the texts no proper reading of the book is possible. It can have been intended only for mechanical use.

No. VII. Book.

Belongs to M. 7. Acquired by Mr. Macartney, together with eight other books, from Islām Akhūn for Rs. 40. Said to have been found in a half-buried house in Aq Talā Tūz, see Introduction, p. xvii. Size, $13 \times 11\frac{1}{2}$ ". Number of forms, 39. Paper, variety IIIc. Many leaves bear fatty stains, and a few are damaged by burns. Riveted with three copper pegs; the guards consisting on one side of irregular quadrangular pieces, about $2\frac{1}{2}$ " square, cut from an ornamented plaque, similar to those shown in Plate IV, fig. 1, on the other side of circular pieces, about $1\frac{1}{4}$ " diameter, resembling a coin (see Plate IV, figs. 2-9). Printing very carelessly done. The block was not properly inked, the impressions are very faint; moreover they are not properly adjusted; not unfrequently one or two lines of two successive impressions are printed over one another; often the columns are not kept straight.

Contains recension If, i.e., lines 1, 2, 4, 5 of A, printed in four columns on each page, each column (except the second) consisting of seven or eight impressions; but in the second column on each page

(counting from the outer margin of the page) one impression, being the fifth of the series of eight, is omitted, leaving a square blank. To this rule there are only very few exceptions: on one page (form 23, page 1) I have observed only three columns; and on four pages (f. 21, p. 4; f. 30, p. 4; f. 33, p. 3; f. 37, p. 4) there is no blank space; and on one page (f. 13, p. 4) the blank space takes the place of the third impression of the series of eight. On each page the four columns stand in the same position towards one another, either all four upright, or all four reversed; but there is no order whatever with regard to different pages; on one page, all four columns may be upright, on the next page they may again be all upright or they may be all reversed. No. VII in Woodcut No. 12 will give some idea of the arrangement of the text on the pages of this book. In five places an altogether different text is printed in the blank space, and the print of this text, with one exception (on form 22, p. 1), always runs at right angles with the proper text of the book. These five places are: form 4, pp. 2, 3; f. 22, pp. 1, 4; f. 23, p. 4; f. 27, pp. 2, 3; f. 29, pp. 2, 3. The text, thus introduced, is formula A of the Second Set.

No. VIII. Book.

Belongs to M. 7. Found and acquired in the same way as No. VII, *q.v.* Size, $10\frac{1}{2} \times 6\frac{3}{4}$ ", but elliptical in form, as shown in Woodcut No. 12. Number of forms, 44. The usual three blank pages are wanting at one end of the book; on the other hand there is in the middle of the book one form with three blank pages, from which it would seem that in binding the book the final form has been misplaced. Paper, variety IIIc. Numerous fatty stains, and a few burns. Riveted with two copper pegs only, the guards being small elliptical (about $1 \times \frac{5}{8}$ ") pieces, cut from a plaque, similar to the round pieces shown in Plate IV, figs. 4-9.

Contains recension I_g, *i.e.*, lines 9, 11, 13, 14 of formula C, printed in five columns on each page, each column consisting as a rule of two impressions; therefore ten impressions of the text on each page. Exceptionally $2\frac{1}{2}$ impressions are found on a few pages. As a rule the columns are turned head to head on two adjoining pages; out of a total of 84 pairs of such pages, that arrangement is found in 58 pairs. In 6 other pairs the columns are turned foot to foot. In the remaining 20 pairs, the foot of the columns on one page is turned towards the head of the columns on the adjoining page.

SECOND SET. (Plates IX, X, XIII and XIV.)

This set comprises six books. Some portions of the text are also found in the three books of the Sixth Set, and in book VII of the First Set. A detailed description of this second set, illustrated by two Plates (Nos. I and II), was published by me in the *Proceedings* of the Asiatic Society of Bengal, for April, 1898 (pp. 124–131). I shall, therefore, here content myself with a briefer account, but correcting some errors and adding such information as I have been able to glean in the meantime.

The text, occurs in two different recensions, a shorter one of 12 lines and a longer of 13 lines, which I shall denote respectively by *IIa* and *IIb*. The shorter recension *IIa* (see Plates IX, fig. 2 and X, fig. 1) has its text arranged in two columns, with a wide interval, running vertically, while another wide interval intersects the two columns horizontally between the 7th and 9th lines. The two intervals thus present the shape of a cross. The longer recension *IIb* (Plate X, fig. 2) fills up these cross-shaped intervals with additional texts. It consists, therefore, of three columns, the additional column being placed in the vertical interval, and of thirteen lines, the additional line occupying the horizontal interval. It will be noticed that there are a few differences in the type of the two recensions, *e.g.*, in the first letter of lines 6 and 7; but this may be, merely due to imperfect inking. Recension *IIa* is found in books I–III and recension *IIb* in books IV–VI.

The shorter text *IIa* which is common to both recensions, consists of six portions or formulas, which I shall distinguish as A, B, C, D, E and F. The formulas A, B, C comprise lines 1, 2, 3–5, 6, 7–9, 10, 11, 12, 13 of column I respectively, while formulas D, E, F are made up of the corresponding lines of column II. The 4th line appears to be an additional one, inserted into what must have been originally an interval, similar to the additional line inserted, in the longer recension *IIb*, into the still existing horizontal interval. It would seem that a third recension must have existed, which possessed two horizontal intervals, between lines 3, 5 and 7, 9 respectively. I have not, however, met with this third recension in any book. Of the six formulas, C (*i.e.*, lines 9–13 of column I) is found in books Nos. I and II of the Sixth Set (see Plate XIV), while formulas A, B, D, E (each consisting of three lines) are found in book No. III of the Sixth Set, and formula A is also found in book VII of the First Set (see Plate XIII). As yet the formula F has not been found by me separately in any book.

For printing these several texts seven different blocks must have been in use: one for recension *IIa*, another for recension *IIb*, and five more for the five formulas A, B, C, D, E. This is clearly shown by the enclos-

ing lines which still exist. These lines, *e.g.*, are seen running right round the two columns of recensions IIa and IIb, see Plates IX and X. They are also seen enclosing each of the five formulas A, B, C, D, E, see Plates XIII and XIV. As shown by these lines, the dimensions of the blocks must have been about $1\frac{3}{4} \times 1\frac{5}{8}$ " for A, $2\frac{3}{8} \times 1\frac{3}{8}$ " for C, $2\frac{1}{8} \times 1\frac{1}{4}$ " for D, and $1\frac{5}{8} \times 1\frac{1}{4}$ " for E. The additional portions, *viz.*, the middle column III of recension IIb, line 4 of recensions IIa and IIb, and line 8 of recension IIb, do not appear to have been printed separately; nor is there any evidence to show that separate blocks existed for printing them.

It is probable that once there existed three blocks: (1) a block holding a text of 11 lines, omitting line 4 of recension IIa, and therefore showing two blank intervals and presenting the shape of a double cross; I may call this recension IIc; (2) a block holding a text of 12 lines, with one blank interval, in the shape of a single cross, being recension IIa; (3) a block holding a text of 13 lines, with no blank interval, being recension IIb. No book, exhibiting recension IIc, has come to light. The block for it, therefore, cannot have been found by the treasure-seekers. If it had been found, it is morally certain (on the assumption of forgery) that books would have been printed with it and brought into the market. But, the block for recension IIc not having been found, it is difficult to understand, on the one hand, how the existence of recension IIa, should have suggested to a forger to omit line 4 and manufacture blocks for A, B, D, E; or, on the other hand, how the separate existence of A, B, C, D and E should have suggested to a forger to combine them into one text IIa, and manufacture a block for it, containing the intermediate line 4 and a blank interval between lines 7 and 9; or again, to combine them into an alternative text IIb and manufacture for it another block containing the two intermediate lines 4 and 8. One can imagine a forger omitting extant lines, but not inventing new lines for which he has no pattern. Add to this that the formula F has never been found printed separately; so that the forger would have had to invent, for the recensions IIa and IIb, not only the intermediate lines, but also the whole formula F. The improbabilities of such a theory are overwhelming. It follows, therefore, in the alternative, that either the books are genuine—or that at least the original blocks must have been found for the recensions IIa and IIb as well as for the formulas A, B, C, D and E. From these original blocks, of course, books might have been printed; but the forgery could have extended no further.

With regard to the question of the beginning and end of the text, book No. III affords a similar test to that in book No. I of the First Set. In that book one end of the text is always turned towards its upper and lower edges, whence it may be concluded that that end

holds the beginning or the top-line of the text. On the Plates the text is represented in the position thus indicated.

One book, No. III, of this Set, as will be shown below, is provided with additional small legends, similar to those in Book IV of the First Set.

No. I. Book.

Same as "Block-print β " in *Proceedings*. Belongs to M. 3. Size, $6\frac{3}{4} \times 4$ ". Number of forms, 38. Riveted with three copper pegs, which are held in position by two copper slips, running in front and at the back of the book, along its longer side, and measuring $6\frac{3}{4} \times \frac{3}{8}$ inches. Paper, variety IIIa. Fatty stains on many leaves; no marks of burning or singeing.

Contains recension IIa, printed once on every page, and standing upright and reversed on every second or third form; thus upright on forms 1, 2, 5, 6, 7, 9, 11, 14, 17, 19, 21, 23, 25, 27, 28, 31, 32, 35, 36, 38; reversed on forms 3, 4, 8, 10, 12, 13, 15, 16, 18, 20, 22, 24, 26, 29, 30, 33, 34, 37.

No. II. Book. (Plate IX, fig. 2.)

Same as "Block-print α " in *Proceedings*. Belongs to G. 7. Size, $11\frac{1}{4} \times 7\frac{3}{4}$ ". Number of forms, 32. Peculiar in having covers of paste-board, made of four ordinary leaves pasted together. Paper, variety IIIb. Most pages stained, and singed or burned. Bound with three copper nails.

Contains recension IIa, printed in three columns on each page; each column consisting of one impression; accordingly the text three times on each page, but reversed on alternate pages, *i.e.*, turned foot to foot, similar to the arrangement of book No. IV of the First Set (Woodcut No. 11). With the exception of one form, the columns of the text are printed parallel to the narrower side of the book, so as to turn their foot towards the inner margin of the book, and so close together that their edges touch, and sometimes overlap one another. The exceptional form is the 22nd. It bears on page 1-3 also impressions of recension Ia of the First Set; and the impressions of the two different texts, indicated in the subjoined diagrams by the letters *dc ba* and the numerals 321 respectively, are arranged as follows; the inner margin of the page being indicated by parallel lines.

1st page. (Plate IX).

321	dc	ba
654	hg	fe
987	ml	ki
ml ki	hg fe	dc ab

2nd page.

321	dc	ba
654	hg	fe
987	ml	ki
321	dc	ba
654	hg	fe
987	ml	ki

3rd page.

321	dc	ba
654	hg	fe
987	ml	ki
321	dc	ba
654	hg	fe
987	ml	ki

4th page.

321	dc	ba
654	hg	fe
987	ml	ki
321	dc	ba
654	hg	fe
987	ml	ki

This would seem to have been the trial-form, employed to discover by which arrangement the largest number of impressions could be crowded on to one page. The usual arrangement is shown in the margin.

ml	hg	dc	ik	ef	ab
			lmki	gh	cdab
			lmki	gh	cdab
			lm	gh	cd

No. III. Book. (Plate X, fig. 1.)

Same as "Block-print γ " in *Proceedings*. Belongs to M. 3. Size, $11\frac{1}{2} \times 4\frac{1}{8}$ inches. Number of forms, 40. Bound with three twists of paper. Paper, variety IIIa. A few fatty stains and burns; on the whole fairly clean. Printing ends on the penultimate page of the last form, instead of the ante-ante-penultimate page as usual.

Contains recension IIa; there being two impressions of it on each page, placed foot to foot, the upper one being complete (12 lines), the lower more or less incomplete (as a rule 10 lines), the arrangement being similar to that in Book No. I of the First Set. There are only four exceptional forms, on which the impressions are placed head to foot; viz., forms 6, 12, 17 (1st, 2nd, 4th pp.), and 31 (2nd and 4th pp.). Seeing that there are 40 forms (or 156 printed pages), these few exceptions (13 pages) are evidently accidental misprints. As in the case of book No. I of the First Set, this "foot-to-foot" arrangement of the text, seems to be a clear indication as to which is to be taken as its top-line. Within the horizontal intervals, in the middle of the page, additional small legends (similar to those of No. IV of the First Set), consisting of 4 to 6 letters, are inserted, running in the same direction as the text, but of somewhat larger size, and apparently written by hand. They are all shown on Plate II of the *Proceedings* for 1898. As in the case of Book No. IV of the First set, they do not occur on every page, but only on the two outside pages of a form. Moreover, in nearly one-half of the forms (viz., 19 out of 40) they do not occur at all.

No. IV. Book.

Same as "Block-print δ " in *Proceedings*. Belongs to M. 3. Size, $8 \times 5\frac{1}{2}$ inches. Number of forms, 40. Riveted with three copper pegs, the guards being small oblongs, 1 or $1\frac{1}{4} \times \frac{3}{8}$ ". Paper, variety IIIa; on the whole fairly clean, no burns. Printing rather indistinct, owing to the inferior quality of the paper, on which the ink has a tendency to run, so that the imprint occasionally shows on the other side, in which case sometimes the reverse page is not printed at all.

Contains recension IIb, printed once on each page, but, exceptionally, standing upright on every page, so that the book can be read right through, from page to page, without turning it right round. To this arrangement there are only a few exceptions; on 14 pages (out of a total of 74 printed ones) the imprint is reversed, and these are clearly accidental errors. There are 12 forms, which at first seem not to agree with the arrangement, all the imprints on them being reversed. But they only require to be folded the other way, and to be turned, when they all come right. With respect to these forms, therefore, the book has only been carelessly bound.

No. V. Book. (Plate X, fig. 2.)

Same as "Block-print ϵ " in *Proceedings*. Belongs to M. 3. Size, $9\frac{1}{2} \times 4\frac{1}{4}$ inches. Number of forms, 34. Riveted exactly like No. IV. Paper, variety IIIa. Many stains, but no burns. Printing similar to that in No. IV.

Contains recension IIb, printed twice on each page, so that the two impressions stand head to foot, the lower one being complete (13 lines), the upper, more or less incomplete (as a rule 6 or 8 lines, *i.e.*, ll. 13-8, or ll. 13-6) owing to want of space. There are only four exceptional pages on which they stand foot to foot, *viz.* form 7, p. 4; f. 17, p. 3; f. 23, p. 1, and f. 26, p. 1; and these, of course are careless misprints. There are also two pages on which there is only one impression; *viz.* form 17, p. 4 and f. 26, p. 2.

In the ordinary, head-to-foot, arrangement, the pairs of impressions stand upright and reversed on alternate pages.¹⁵ The two varieties of arrangement may be represented thus, the parallel lines representing the inner edge of the pages or the fold of a form.

Ordinary.	Exceptional.
$\left\{ \begin{array}{l} efgh \\ iklm \\ abcd \\ efgh \\ iklm \end{array} \right\} \left\ \begin{array}{l} u\eta\chi\iota \\ \upsilon\beta\delta\epsilon \\ \rho\sigma\tau\nu \\ u\eta\chi\iota \\ \upsilon\beta\delta\epsilon \end{array} \right\}$	$\left\{ \begin{array}{l} efgh \\ iklm \\ u\eta\chi\iota \\ \upsilon\beta\delta\epsilon \\ \rho\sigma\tau\nu \end{array} \right\}$

The ordinary arrangement is very curious for two reasons: (1) because the page commences with the incomplete member of the pair of texts, which must have been awkward in reading the book, if it was meant for reading; (2) because it compels the reader to begin with the left hand pages, that is, at the wrong end of the book, assuming

¹⁵ There are some three or four exceptional pages which do not keep the alternate order. These evidently are misprints.

that the proper way of reading these books is from the right to the left in the Semitic fashion. It is, however, by no means certain that the direction of the scripts is from the right to the left. See also the General Remarks on the Orientation of the Books.

No. VI. Book.

Not mentioned in the *Proceedings*. Belongs to M. 6. Acquired from the Rev. Mr. Högberg. Size, $9\frac{1}{2} \times 4$ inches. Number of forms, 8; but the book is a mere fragment; a large portion, including beginning and end and the rivets, is wanting. Paper, variety IIIa; some stains, but no burns. Printing similar to that in Nos. IV and V, but even worse; ink has run so badly through the paper that many pages could not be printed at all, the print on one side showing through on the other.

Contains recension IIb, printed exactly as in No. V, two impressions on each page, standing head to foot, the lower being complete, the upper, incomplete.

THIRD SET.

This set comprises three books. The peculiarity of them is that their forms are not placed one upon the other, as in the bound books of all the other sets, but are inserted one within the other. Moreover the printing does not commence upon the fourth, but on the second page, and does not stop on the ante-ante-penultimate, but on the penultimate page.

The text of this set consists of two short formulas A and B. Formula A is made up of five short lines, of about 5 or 6 letters each. It is found in all three books. Formula B consists of four longer lines of about 7 or 8 letters each, and is only found in two books, Nos. II and III.

For printing these two formulas, two separate blocks must have been used. This is evident from the lines, enclosing the formulas, as well as from the different size of the two blocks. Measured between those lines, the dimensions are $1\frac{5}{8} \times 1\frac{2}{5}$ " and $2\frac{1}{4} \times 1\frac{7}{16}$ " respectively.

There is nothing to indicate what is top and bottom of the formulas.

No. I. BOOK. (Plate XI.)

Belongs to M. 3. Size, $14\frac{3}{4} \times 4\frac{1}{4}$ ". Number of forms, 16. It was originally bound with three twists of paper. These having broken, the book has been re-stitched with fresh thread, apparently by the finder, or in Mr. Macartney's office. It is, therefore, not certain whether the number of the forms is complete. Paper, variety IIIb. Leaves much burned and torn.

ment of the impressions. Occasionally formula A occupies the whole page, in which case there are four columns, with five (or six) impressions in each; total 20 (or 24) impressions. At other times formula B occupies the whole page, when there are only three columns, with five impressions in each; total 15 impressions. But in many cases both formulas occur promiscuously on the page, in which case also there are only three columns, with a total of 15 or 16 impressions. Clearly this book cannot have been intended for intelligent reading.

First Sheet.

Inside.										
<table border="0"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">BBA</td> <td style="padding-left: 5px;">BBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">BBA</td> <td style="padding-left: 5px;">BBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">BBA</td> <td style="padding-left: 5px;">BBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">BBA</td> <td style="padding-left: 5px;">BBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">BBA</td> <td style="padding-left: 5px;">BBB</td> </tr> </table>	BBA	BBB	BBA	BBB	BBA	BBB	BBA	BBB	BBA	BBB
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BBA	BBB									
BBA	BBB									
BBA	BBB									
BBA	BBB									

Second Sheet.

Outside.	Inside.																				
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Third Sheet.

Outside.	Inside.																								
<table border="0"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">AAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VAVA</td> </tr> </table>	AAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	VAVA	<table border="0"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">AVVA</td> <td style="padding-left: 5px;">VBBV</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VBBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VBBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VBBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VBBB</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">VAVA</td> <td style="padding-left: 5px;">VBBB</td> </tr> </table>	AVVA	VBBV	VAVA	VBBB	VAVA	VBBB	VAVA	VBBB	VAVA	VBBB	VAVA	VBBB
AAVA	VAVA																								
VAVA	VAVA																								
VAVA	VAVA																								
VAVA	VAVA																								
VAVA	VAVA																								
VAVA	VAVA																								
AVVA	VBBV																								
VAVA	VBBB																								
VAVA	VBBB																								
VAVA	VBBB																								
VAVA	VBBB																								
VAVA	VBBB																								

No. III. BOOK.

Belongs to G. 7. Size, 9x7". Number of forms 18. Paper, variety IIIa. A few burns and fatty stains. Riveted with three copper pegs.

p. 46	p. 47
VVA	AAA
VAA	AAA
AVV	VAV
VAA	VAV
VVV	AAA
AAV	AAA
VAA	AAA

Contains only formula A, printed in three columns on each page, the two inner columns consisting of seven, and the outer, of six impressions, which latter stand at right-angles to the former; otherwise there is no sort of order in the relative position of the inprints, as the marginal example may show.

FOURTH SET. (Plate XII).

This set comprises eight books. Two of the books contain also other texts in addition to their own, *viz.*, No. VII contains also the text of the Fifth Set, and No. VIII, of the Seventh Set.

The text of the Fourth Set consists of a formula, containing five lines of writing. There appear to have been two blocks, from which this formula has been printed off; for I have noticed a very slight difference in the dimensions of the print: in Books I, III, V, the lines differ by $\frac{1}{8}$ to $\frac{1}{12}$ of an inch in length from those in Books II, IV. The enclosing lines of the block of the longer print alone are preserved in book No. VII, and this block measures, within the enclosing lines, $3\frac{1}{2} \times 2\frac{1}{2}$ inches.

Two of the books seem to afford indications whereby to determine what is top or bottom, right or left, and beginning or end of the text. These are Nos. II and VI. No. II is printed with three columns on each page, and a column consists, as a rule, of six impressions of the formula; but there are two pages on which the columns contain $6\frac{1}{2}$ impressions, and one page on which they contain only $5\frac{1}{2}$ impressions; as illustrated by diagram I on the margin. On the other hand book No. VI is printed

<p>I</p> <p>• • •</p> <p><i>a b c</i> } <i>d e f</i> } 6 <i>g h i</i> } <i>a b c</i> } $\frac{1}{2}$ <i>d e f</i> }</p> <p>II</p> <p>• <i>a b c</i> <i>a b</i> • <i>a b c</i> <i>a b</i> <u> </u> <u> </u> 2 $\frac{1}{2}$</p>	<p>with $2\frac{1}{2}$ columns on each page; that is, two columns contain, each, two complete impressions of the formula, while the third column contains only two half-impressions of it; as illustrated in diagram II. It would seem right to conclude from diagram I, that <i>a b c</i> must be the top-line; for if <i>g h i</i> were taken to be the top-line, the printing would have commenced with a mutilated formula. Similarly diagram II would show that <i>a</i> is right and <i>c</i> left of the formula, and that the reading of the latter must commence, not with <i>c</i>, but with <i>a</i>; or in other words that the formula must be read from the left to the right. It would follow, therefore, that</p>
--	--

if the formula is to be read in the European fashion, it commences in the left-hand upper corner, as shown in the photographic facsimile on Plate XII; or, if it is to be read in the Chinese fashion, its commencement lies in the right-hand upper corner. Unfortunately, as the case of the Fifth Set shows, the argument is not so conclusive as would be desirable.

No. I. BOOK.

Belongs to M. 7. Said to have been found at Aq Talā Tūz. Size, $23\frac{1}{4} \times 13\frac{1}{2}$." Number of forms, 36. Riveted with three copper pegs,

the guards being large pieces of a broken-up plaque (see Plate IV, fig. 1). In almost perfect preservation. Paper, varieties IIIb and IIIc mixed.

Text printed in the three columns on each page; each column consisting of nine impressions of the formula, which accordingly is repeated 27 times on every page, or 3,726 times in the whole book (*i.e.*, 27×138 printed pages). The columns run parallel with the longer side of the book, and stand regularly upright and reversed on alternate pages; that is, upright on pages 4, 6, 8, etc., and reversed on pages 5, 7, 9, etc. The pages 4, 6, 8, etc., of course, are left-hand pages; and when the book is turned right round, in order to bring the reversed formulas into the upright position to read them, the pages 5, 7, 9, etc. now become left-hand pages. It follows, therefore, that on reading this book, all the left-hand pages must be read first, and afterwards all the right-hand pages,—which latter pages, of course, on turning the book round to read them, also become left-hand pages. Accordingly whichever way the book is placed for the purpose of reading, it is always the left-hand pages that must be read.

This book is distinguished from all others, in having a finely executed sketch of a head on the fourth page of the 15th form; see Plate XVII. The sketch is placed horizontally across the page, so that the bottom of it is turned towards the inner margin of the page. From the fact that the columns of the print curve round the sketch, it is clear that, it was drawn on the page, before the latter was printed on. The head seems to me to show Arian features, and is sketched with much artistic skill.

No. II. Book.

Belongs to M. 7. Found at Aq Talā Tūz. Size, $15\frac{3}{4} \times 11\frac{3}{4}$ ". Number of forms, 17. Bound with three twists of paper. Well preserved; a few slight burns and stains. Paper, variety IIIb. Printing not quite distinct. It commences, as usual on the 4th page, but ends on the penultimate page (*i.e.*, on the 3rd page of the last form).

Text printed in three columns on each page; each column consisting, as a rule, of six impressions of the formula, which accordingly is repeated 18 times on every page. On two pages there are $6\frac{1}{2}$ impressions, and on one page only $5\frac{1}{2}$. The columns stand regularly upright and reversed on alternate pages; that is, upright on the right-hand pages 5, 7, 9, etc., and reversed on the left-hand pages 4, 6, 8, etc. Accordingly this book must be read differently from book No. I; that is, in whichever way it is placed for reading, its right-hand pages must be read. There are only five pages which do not conform to the regular order; these are p. 4 of form 3; pp. 1 and 4 of form 10, and p. 2 of form 15; and these, clearly, are mere lapses of the printer.

No. III. BOOK.

Belongs to M. 6. Purchased from Badruddin. Size, $22\frac{3}{4} \times 13''$. Number of forms, 19; all (with the exception of forms 7 and 8) cut through at the back, into separate leaves. Very well preserved; only very few and very slight burns and stains. Paper, variety IIIb. Riveted with four copper pegs.

Text printed in three columns on each page; each column consisting of eight impressions of the formula, which, accordingly, is repeated 24 times on every page, or 1,680 times in the whole book (*i.e.*, 24×70 printed pages). The columns run parallel with the longer side of the book, and stand regularly upright and reversed on alternate pages; exactly as in No. II; that is to say, whichever way the book is placed, the right-hand pages must be read. There are only four exceptional pages, due to blundering of the printer; *viz.*, pp. 2 and 3 of form 6; p. 4 of form 9, and p. 1 of form 19.

No. IV. BOOK.

Belongs to M. 7. Found at Aq Talā Tūz. Size, $10\frac{3}{4} \times 7\frac{1}{2}''$. Number of forms, 30. Bound with three twists of paper. Paper, variety IIIb. Extensively marked with water and fat stains; no burns. Print rather difficult to read, owing to the stains and defective inking. Final blank leaf lost.

Text printed, as a rule, in three columns on each page; each column consisting of two impressions of the formula, which, accordingly is printed six times on every page. The columns run parallel to the narrower side of the book, but do not stand upright and reversed on alternate pages, but keep the same direction on every page, that is, on the left-hand pages the head of the columns is turned outside, and on the right-hand pages, inside, as shown in the diagram on the margin. Hence in reading the book, it does not require turning round. There are a few exceptional pages, on which the imprints take reversed positions, but these are clearly blunders of the printer or binder. There are, however, seven pages, on which the arrangement is altogether different; *viz.*, p. 4 of form 1; and pp. 1 and 4 of forms 6, 10, 18. On these pages the text is printed in two columns, running parallel to the longer side of the book, and each column contains four impressions of the formula, which, accordingly, is repeated eight times on each of these pages.

left	right
bc abc	bc abc
bc abc	bc abc
bc abc	bc abc
bc abc	bc abc
p. 6	p. 7

No. V. BOOK.

Belongs to M. 3. Purchased from Badruddin. Size, $11 \times 6\frac{1}{2}''$. Number of forms, 45. Riveted with three copper pegs. Paper, variety

IIIc. Fairly clean; a few fatty stains and small burns; the two outside leaves torn to shreds. Print almost illegible, owing to defective printing.

Text printed exactly as in book No. IV, save that the exceptional arrangement of the text in two columns never occurs.

No. VI. BOOK.

Belongs to M. 7. Found at Aq Talā Tūz. Size, $8 \times 5\frac{3}{4}$ ". Number of forms, 26; but the first form is in shreds, and the last form is misplaced through a blunder of the binder, standing fifth in the present series. Riveted with three copper pegs. Many large fatty stains and a few burns. Paper, variety IIIb. Print almost illegible, owing to defective inking.

Text printed in $2\frac{1}{2}$ columns on each page; each column consisting of two impressions of the formula, of which, accordingly, four complete and two half-impressions stand on every page. The columns run parallel to the narrower side of the book, and are arranged exactly as in Book No. IV. Here, too, as in No. IV, there are a few exceptional

pages on which the imprints take reversed positions. An example, which shows also another misprinted anomaly, is given on the margin from form 11.

Form 11.	pages	on which	the imprints	take	reversed	positions.
(margin).						An
p. 2.		p. 3.				example,
abv		abc	abv			which
abv		abc	abv			shows
abv		abc	abv			also
abv		abc	abv			another
abv		abc	abv			misprinted
abv		abc	abv			anomaly,
abv		abc	abv			is
abv		abc	abv			given
abv		abc	abv			on
abv		abc	abv			the
abv		abc	abv			margin
abv		abc	abv			from
abv		abc	abv			form
abv		abc	abv			11.

It may be noted that there is a slight blank margin at the top of the pages (as indicated in the diagram), while at the bottom the print runs to the very edge. This shows the *modus operandi* of the printer, who commenced printing at the top of the page, though (as shown by the inner column on page 3 of the diagram) not always with the initial edge of the block. But when he came to printing the half-impression on that inner column, he turned the block round, apparently with the object of getting the initial portion of the formula on to the page. It seems that, as long as the whole of the formula could be accommodated on the page, the printer did not care, in what position he placed the impression of it; but when he could only accommodate a portion of it, he was careful in printing its initial portion. This seems to be a reasonable explanation of the anomaly, and it points to what apparently must be taken to be the beginning of the formula.

No. VII. BOOK. (Plate XII.)

Belongs to M. 6. Purchased from Badruddin. Size, $11\frac{1}{2} \times 8\frac{1}{2}$ ". Number of forms, 12; all cut through at the back into separate leaves. Exceptional in being bound with only two twists of paper, and in commencing its printing on the second, and stopping it on the ante-

penultimate page. Paper, apparently variety IIIb. Rather rotten; several leaves mutilated; very much damaged by extensive fatty stains and burns. Printing rather illegible on many pages; two of them (pp. 10 and 11) being altogether blank, owing to the print on the reverses (pp. 9 and 12) showing through.

Contains its own proper formula, as well as that of the Fifth Set. The latter, however, is only found on pages 2, 3, 5, 8, 9, 12, 14, 15, 21, 29, 32, 37, 40 and 45; and on these pages it is found in addition to the proper formula of the Fourth Set. When so found, it always occupies the outer side of the page, except on p. 14, where it stands on the inner side; see, below, marginal diagram II. On page 13, it should also have been found, but (apparently by an oversight) the space has been left blank.

Text printed in three columns on each page; each column consisting

I.

p. 2. p. 3.
(broad margin).

a	a	a		abc	abc	1
q	q	q		abc	abc	2
c	c	c		abc	abc	3
a	a	a		abc	abc	4
q	q	q		abc	abc	5
c	c	c		abc	abc	6
a	a	a		abc	abc	7
q	q	q		abc	abc	8
c	c	c		abc	abc	9

(no margin).

of three impressions of the formula; that is, either thrice the proper formula of the Fourth Set; or twice that formula and once the formula of the Fifth Set. As the latter formula is longer than that of the Fourth Set, and hence occupies more space, it is only found $2\frac{1}{2}$ times on a page; and on these pages, the lower portions of the columns overlap one another. This will be understood from the diagram I shown in the margin, in which *abc*, and *1234* denote the formulas of the Fourth and Fifth Sets respectively. Here, also, the same *modus operandi* of the printer may be noticed,

as in No. VI. He commenced at the top of the page (as shown in the marginal diagrams) where there is a broad blank margin, while at the bottom the print runs right up to the edge of the pages with the half-impression of the formula of the Fifth Set. This circumstance would seem to serve as an indication of the beginning of the latter formula; though this conclusion is not quite borne out by diagram II, which shows the exceptional page 14, above referred to. This diagram would rather seem to show that the beginning of the formula of the Fifth Set lies at its other extremity; but then both pages, especially page 15, show an anomaly in the relative position of the two formulas.

II.

p. 14. p. 15.
(broad margin).

a	a	4		c	c	4
b	b	3		q	q	3
c	c	2		a	a	2
a	a	1		c	c	1
q	q	7		a	a	7
c	c	6		q	q	6
a	a	5		a	a	5
q	q	4		c	c	4
c	c	3		a	a	3
a	a	2		q	q	2
q	q	1		a	a	1
c	c	7		q	q	7
a	a	6		a	a	6
q	q	5		c	c	5
c	c	4		a	a	4

(no margin).

position of the two formulas.

It will further be seen from the above two diagrams that the columns run parallel to the narrower side of the book, and are arranged in a

different position from that in books Nos. IV to VI. There the heads of the columns are turned in the same direction on consecutive pages (see diagram in No. IV), while here the heads are always turned in opposite directions, against one another, that is, they are always turned reversely on alternate pages.

No. VIII. BOOK.

Belongs to M. 8. Found at Kiang Tūz. Size, $14 \times 8\frac{3}{4}$. Number of forms, 20. Paper, variety III*d*. Surface greased, and a few burns. Printing rather indistinct. Riveted with two copper pegs.

Contains besides its own proper text that of the Seventh Set. The latter is found only on one form, the 3rd, where it is printed, on all its four pages, exactly in the same way as the proper formula of the Sixth

1st form, p. 14. Set. This formula is printed in two columns on each page, running, as a rule, parallel to the longer side of the book and consisting each of five or six impressions. The columns stand in no particular order, sometimes upright and reversed on the same page, sometimes so on alternate pages, sometimes in the same position on consecutive pages. On four pages (*viz.*, on the first and last printed pages, as well as on the 13th and 28th) the columns stand at right-angles to one another, the outer column consisting of only four impressions, as shown in the marginal diagram.

abc
abc
abc
abc
abc
abc

abc
abc
abc
abc
abc
abc

FIFTH SET. (Plates XI and XII.)

This Set comprises eight books. Its text is found in two different recensions, a shorter one of three, and a longer of four lines. These I shall denote by *Va* and *Vb* respectively. Besides its own proper text, there is also found on one page of book No. VIII the text of the First Set.

The shorter recension *Va* is found in all the books of this set; also in No. VII of the Fourth Set. The longer recension *Vb* is only found in No. VIII of this set, where it occurs together with recension *Va*. The two recensions only differ from each other by *Vb* adding a fourth line to the three lines of *Va*.

Two distinct blocks have been used for printing the two recensions. This is shown by their enclosing lines which may be seen on the facsimiles. The block of *Va* measured $4\frac{1}{8} \times 1\frac{1}{3}$ inches; that of *Vb* measured $4\frac{1}{8} \times 1\frac{7}{8}$ inches.

There is nothing to show which is top and bottom, or right and left, or beginning and end of the two formulas. From the way in which

the formula is printed in No. VII of the Fourth Set (Pl. XII), it would seem probable that the top of it is the line which adjoins the formula of the Fourth Set; for on this supposition it would lie on the page in the same direction as that formula. It would also seem probable that it commences on the right-hand side, and must therefore be read from the right to the left; for that half of the formula, which appears on the page of No. VII of the Fourth Set, is, on the above supposition, its right-hand half, and it seems reasonable to assume that, when only one-half could be printed, it was the initial half that was printed. Moreover in certain pages of book No. IV (see below the detailed description) it is always what on the above theory is the left-hand side of the formula which appears in the middle of the page; and this circumstance points to the same conclusion, as it seems also reasonable to assume that, as usual, the reader was intended to commence reading from the margin of the page. But unfortunately this argument is weakened by the fact that in books Nos. I and III, where occasionally only a portion of the formula is printed, it is indifferently either one or the other of its two outer lines that is omitted. The fact is that the force of all such arguments depends on the assumption that these block-print books were intended for reading. If they were not meant for reading, but intended for the mechanical use of merely turning the pages, it was obviously quite immaterial which portion of the formula was printed whenever the space did not suffice to print the whole.

No. I. Book.

Belongs to M. 3. Purchased from Badruddin. Size, $8\frac{1}{4} \times 5\frac{1}{2}$ ". Number of forms, 37; the first and last forms, however, consist of two sheets each, placed within one another, and pasted together¹⁶ to form thick covers, as in No. II of the Second Set. Paper, variety III*b*. Fairly clean. Printing, indifferent. Riveted with three copper pegs.

Contains recension Va, printed six times on each page, in a column which runs parallel to the longer side of the book, and stands regularly upright and reversed on alternate pages. The latter rule is not observed on 10 pages out of a total of 142 pages, and these pages, therefore, represent clearly mere accidental lapses of the printer. On a few pages, the formula is only found five-times repeated; but on many pages the sixth repetition, standing too close to the top or bottom of the page, is incomplete, one of the three lines of the formula being omitted. This omitted line is sometimes one, sometimes the other of the two outer lines, so that no conclusion can be drawn as to what is the initial and what the final line of the formula.

¹⁶ In the initial cover the paste has given way, and the leaves are now separate.

No. II. BOOK.

Belongs to M. 9. Size $7\frac{3}{4} \times 5\frac{3}{4}$ ". Number of forms, $22\frac{1}{2}$, the seventh form consisting of only one leaf. Paper, variety IIIb. A few leaves damaged by burns and fatty stains. Riveted with three copper pegs, the guards on one side consisting of large fragments of the plaque, shown on Plate IV, fig. 1.

Contains recension Va, printed, as a rule, in two columns on each page; the columns consisting, as a rule, each of four repetitions of the formula, and running parallel to the narrower side of the book. On a few pages there are only three repetitions in the column; the formula accordingly occurs, as a rule, eight times, and exceptionally six times, on every page. The columns are placed in the same direction on every page, that is to say, line 1 of the formula always stands alternately near the outer and inner edges of the page, so that in reading the book, it does not require to be turned round. There is only one exceptional page (evidently a misprint) in which the columns are reversed. Thus

Regular Pages.				Exceptional Pages.			
4th		5th		Regular		Reversed.	
<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>
<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>
<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>
<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>	<i>abcd</i>

As the space is barely sufficient to accommodate the whole breadth of the columns, it happens that occasionally the terminal letters on one side (*a, a, a, a*) of the formula, at other times those on the other side (*d, d, d, d*) are omitted. It is thus impossible to use these omissions as a test for determining the initial and final sides of the formula. The eleventh form is a total exception: on it the text is printed in one column, which consists of six imprints of the formula, and runs parallel to the longer side of the book.

No. III. BOOK.

Belongs to M. 7. Found at Aq Talā Tūz. Size, $11\frac{1}{4} \times 6\frac{3}{4}$ ". Number of forms, 52. Paper, variety IIIc. Initial and final leaves damaged; otherwise well preserved. Riveted with three nails; guards round pieces, as shown on Plate IV, fig. 3.

Contains recension Va, printed in one column on each page, running parallel to the longer side of the book, and consisting of (as a rule) seven, or (sometimes) eight impressions of the formula. When

there are eight repetitions on the page, the space barely suffices for them; and accordingly sometimes one, sometimes the other of the outer lines of the formula is omitted, the same as in No. I. The columns stand upright and reversed on alternate pages; though there are many misprinted pages, about 12 per cent. of the total.

No. IV. BOOK.

Belongs to M. S. Found at Kiang Tūz Size, $12\frac{1}{2} \times 8''$. Number of forms, 20. Paper, variety III*d*. One outer form damaged by burns; entire surface of all leaves greased with fat. Riveted with three copper pegs. Printing commences, contrary to the usual rule, on the second page of the first form, but stops, as usual, on the ante-ante-penultimate page. Print throughout almost illegible, owing apparently to the greasy surface of the paper.

Contains recension *Va*, printed in two columns on each page, running parallel to the longer side of the book, and containing each nine impressions of the formula; there being accordingly 18 impressions on every page. On some pages the columns are printed both upright; on others one column stands upright, the other reversed. Thus

Page 16.	Page 17.
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (1)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (2)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (3)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (4)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (5)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (6)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (7)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (8)
<i>a b c d a b c d</i>	<i>a b c d p o q v</i> (9)

These two arrangements seem to have been observed quite promiscuously; thus: on 1st form upright and reversed throughout,
 on 2nd „ upright throughout,
 on 3rd „ upright on 3rd page only,
 on 4th „ upright on outer pages only,
 on 5th „ upright on two first pages only,
 on 6th „ upright on outer pages only,
 on 7th „ upright on inner pages only,
 on 8th „ do. do. do.,
 on 9th „ do. throughout, etc., etc.

On those pages where the impressions are placed in opposite directions, it is always the left-hand sides of the formula (as seen on Plate

XII) which stand in the middle of the page, adjoining each other. The right-hand sides are near the outer and inner edges of the page; and as the space is rather limited, occasionally the terminal letters on those sides are omitted.

No. V. BOOK.

Belongs to M. 8. Found at Kiang Tüz. Size, $13 \times 8''$. Number of forms, 20. Paper, variety III*d*. Entire surface of all leaves greasy; no burns; the two outside leaves slightly damaged. Print throughout rather difficult to read. Riveted with two copper pegs only. The first (or covering) form is wrongly folded.

Contains recension Va, printed in two columns on each page, which run in right angles to each other, the inner parallel to the longer, the outer parallel to the shorter side of the book. The former consists of ten (exceptionally nine) impressions of the formula, the latter of six, arranged in two lines; the total number of repetitions on every page being 16 (exceptionally 15). The inner columns stand regularly upright and reversed on alternate pages. The outer columns, as a rule, have the third line of the formula (as shown in Plate XII) turned towards the inner column; but on 21 pages (out of a total of 76) the formula is turned the other way, being probably misprints. The two positions are shown in the subjoined diagrams.

Regular.				Exceptional.			
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>
<i>a b c d</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>	<i>a b c d</i>	<i>p q v</i>	<i>a b c d</i>

No. VI. BOOK.

Belongs to M. 8. Found at Kiang Tüz. Size, $13 \times 8\frac{1}{2}''$. Number of forms, 20. Paper, variety III*d*. All surfaces more or less greasy; a few burns; large piece torn out of the fourth leaf. Print indifferent, and rather difficult to read. Riveted with two copper pegs only.

Contains recension Va, the arrangement of which is exactly the same as in No. V, except that the inner column consists, as a rule, of nine, and only exceptionally of ten impressions of the formula.

No. VII. BOOK.

Belongs to M. 8. Found at Kiang Tūz. Size, $16\frac{1}{2} \times 7''$. Number of forms, 20; some of them worn through at the back into separate leaves. Paper, variety III*d*. Fairly clean and well preserved. Riveted with three copper pegs.

Text printed in one column on each page, running parallel to the longer side of the book, and consisting of twelve impressions of the formula. As a rule the columns stand upright and reversed on alternate pages, there being only 13 exceptions (in a total of 74 printed pages), probably misprints.

No. VIII. BOOK. (Plate XI.)

Belongs to G. 7. Size, $8\frac{1}{4} \times 5\frac{1}{2}''$. Number of forms, 32. Has exceptionally seven blank pages both at the beginning and end of the book; that is, printing commences on the 8th page from the beginning, and stops on the 8th page from the end. Paper, variety III*b*. Book in rather bad preservation, and print so faint as to be illegible in many pages. Bound with two twists of paper.

Contains both recensions, *Va* and *Vb*, but the latter only on the outside pages of forms 5, 6, 7, 15, 16, 19, 21, 22, 30, and on the inside pages of forms 14, 23, 29,¹⁷ also on the first (outside) page of form 24; altogether on 25 only out of a total of 114 pages. Curiously enough on the fourth (outside) page of the 24th form there are printed two formulas of the First Set.

Both recensions are printed in two columns on each page, running parallel to the narrower side of the book, and consisting each of three (very exceptionally four) impressions in the case of recension *Va*, and of two (exceptionally three) impressions in the case of recension *Vb*. The

$\begin{array}{ccc} abc & abc & abc \\ abc & abc & abc \\ abc & abc & abc \end{array}$	$\left\ \begin{array}{ccc} pqp & pqp & pqp \\ pqp & pqp & pqp \\ pqp & pqp & pqp \end{array} \right.$	<p>space is not sufficient for the exceptional number of impressions; accordingly in those exceptional cases one or two lines, from either extremity, are omitted. As a rule the columns stand turned in opposite directions on alternate pages, as shown in the margin.</p>
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Page 4 of form 24 is a curiosity. It is shown on Plate XI. The leaf is badly damaged by burns. On one side (page 3) it shows the formula of the Fifth Set in the usual arrangement of two columns, with two impressions in each, running parallel to the narrower side of the book. On the reverse side (page 4) formulas C and E, in the recensions *Ig*

¹⁷ These too become outside pages, if the fold of the forms is turned the other way.

and *Ih* respectively, of the text of the First Set are imprinted, arranged in two columns, at right angles to one another, one running parallel to the longer, the other with the shorter side of the book. The former stands near the outer, the latter near the inner edge of the page. The outer column consists of two impressions each of the recensions *Ig* (ll. 9, 11, 13, 14) and *Ih* (ll. 17, 18, 19); while the inner column consists of four impressions of the recension *Ig*. The two pages are shown in the marginal diagram, the formula of the Fifth Set

Page 3.		Page 4.
<i>abcd</i>		<i>ccc</i>
<i>abcd</i>		<i>eee</i>
<i>abcd</i>		<i>eee</i>
<i>abcd</i>		<i>ccc</i>
<i>abcd</i>		<i>ccc</i>

being indicated by *abcd*, and those of the First Set, by *ccc* (=C=*Ig*) and *eee* (=E=*Ih*) respectively. The circumstance of the two mutilated formulas of the First Set appearing here in this unexpected and purposeless way seems to render the hypothesis of a forgery almost impossible, both with regard to the whole book No. VIII, and to the blocks for the recensions *Ig* and *Ih*.

SIXTH SET. (Plate XIII and Pl. XIV, fig. 1.)

This Set comprises three books. Its peculiarity is that it is not appropriated to one particular text only, but presents a collection of several texts. What was found occasionally as a rare exception in the other sets—the introduction of a few impressions of an alien text into the midst of its own proper one—forms in the Sixth Set its main feature.

Of the three books comprised in it, No. I gives the texts of the Second and Fifth Sets. No. II gives the texts of the Second, Fourth and Fifth Sets, and No. III those of the First, Second, Fourth and Fifth Sets.

No. I. BOOK. (Plate XIV, fig. 1.)

Belongs to M. 7. Found at Aq Talā Tūz. Size, $11 \times 8\frac{1}{2}$ ". Number of forms 30. Paper, variety IIIb. Greatly damaged by exposure to wet; also some large fatty stains and burns. Print almost illegible. Bound with three nails; guards being large rhomboid pieces of flat, thin, ornamental copper, as shown in fig. 1 of Plate IV.

As a rule, the pages of this book present the texts of the Second and Fifth Sets. There are only 6 exceptional pages (out of a total of 114 printed ones), *viz.*, 6, 43, 94, 95, 116, 117, which give the text of the Fifth Set alone.

The text of the two sets are printed in three columns on each page, running parallel to one another and to the longer side of the

book, and standing upright and reversed on alternate pages. It may be also noted that what has been indicated in the facsimiles (Plates X and XII) as the first line of the formulas of the two texts, stand, as a rule (though not always), alongside of one another, pointing to the conclusion that these two lines occupy the same position in the respective formulas, that is, that both are the head-lines (as assumed in the facsimiles) or both the foot-lines. Of the three columns one gives the text of the Fifth Set, and two give that of the Second Set.

The column containing the text of the Fifth Set always occupies the inner side of a page, and consists of seven, or more usually eight, impressions of the formula of that set. But as the space is barely sufficient to accommodate all eight, one line of the 8th repetition is often omitted; this seems to be invariably line 3, as indicated in the facsimile (Pl. XII); which fact also points to line 1 being really the head-line.

The two columns containing the text of the Second Set, always occupy the outer side of a page, and consist each of four impressions of the formula, so that there are altogether eight impressions of it on each page. The formula here printed is only a portion of the text of the Second Set, *viz.*, formula C, or lines 9-13 of column I of that text (Pl. X).

There is one exception to the arrangement above explained. On p. 7 there are only two columns, standing at right angles to each other, the outer one of which consists of four impressions of the text of the Second Set. The two arrangements are shown in the subjoined diagram; *a b c d e f* denoting the text of the Fifth Set, and *1 2 3 4 5 6* that of the Second Set.

Regular.		Exceptional.
(1) <i>a b c d e f</i> 123 123	} (1, 2)	(1) <i>a b c d e f</i> 4 5 6 1 2 3
(2) <i>a b c d e f</i> 456 456		(2) <i>a b c d e f</i> 4 5 6 3 2 1
(3) <i>a b c d e f</i> 123 123	} (3, 4)	(3) <i>a b c d e f</i> 4 5 6 1 2 3
(4) <i>a b c d e f</i> 456 456		(4) <i>a b c d e f</i> 4 5 6 3 2 1
(5) <i>a b c d e f</i> 123 123	} (5, 6)	(5) <i>a b c d e f</i> 4 5 6 1 2 3
(6) <i>a b c d e f</i> 456 456		(6) <i>a b c d e f</i> 4 5 6 3 2 1
(7) <i>a b c d e f</i> 123 123	} (7, 8)	(7) <i>a b c d e f</i> 4 5 6 1 2 3
(8) <i>a b c d e f</i> 456 456		(8) <i>a b c d e f</i> 4 5 6 3 2 1

The correspondence in the arrangement of the texts of the two sets suggests that they may also correspond in their scripts and their meaning. We should have here a bi-script, and perhaps a bi-lingual, book.

No. II. BOOK.

Belongs to M. 7. Found at Aq Talā Tūz. Size, 11 × 8". Number of existing forms 28; but originally it must have been 30, as the two outside forms, forming the covers, are missing. Paper, variety IIIb. Corners rounded off, somewhat similar to those of book No. VIII of the First Set. Condition similar to that of No. I. Bound with three twists of paper.

Contains the text of the Second, and Fifth, as well as that of the Fourth Sets; on alternate forms; commencing with the latter. That is, the text of the Fourth Set is found on forms 1, 3, 5, etc.; that of the Second and Fifth Sets on forms 2, 4, 6, etc.

The latter texts, on their own forms, are arranged exactly as in book No. 1; only as the space is insufficient, a portion of those impressions of the formula (C) of the Second Set, which are nearest the outer edge of the page, is omitted; on two pages (93 and 96) they are omitted altogether.

The text of the Fourth Set is printed in three columns on each page, running parallel to the narrower side of the book, and consisting each of two impressions of the formula which accordingly is repeated six times on every page. The columns keep throughout the same direction. In fact the arrangement of the text is exactly the same as in No. IV of the Fourth Set; see the diagram on p. 87. There are, however, four exceptional pages. On page 107 there are two columns, each consisting of four impressions of the formula (altogether eight repetitions), and

Page 106. abc ३ q v abc ३ q v abc ३ q v abc ३ q v abc ३ q v		running parallel to the longer side of the book. On pages 81 and 84, the arrangement is the same, except that there is only one column in the middle of the page. On page 106, as shown in the marginal diagram, the two arrangements are combined, there being two columns standing at right angles to each other, the outer consisting of three, the inner of four impressions of the formula, and running parallel to the shorter and longer sides of the book respectively.
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No. III. BOOK. (Plate XIII.)

Belongs to M. 8. Found at Kiang Tūz. Size, 13 × 11". Number of forms uncertain, as the outside leaves are missing, the book, in its present condition, beginning and ending with a printed page; but the existing number of leaves is 81. Paper, variety IIIc. Many of the leaves torn, and otherwise damaged by fatty stains and burns. Print often barely legible. Bound with three twists of paper.

Contains the texts of the First, Second, Fourth, and Fifth Sets. Those of the First and Second Sets never occur complete. Portions of them only are found, and always standing separately. Of the First Set the formulas *I**f*, *I**g*, and *I**h* (*i.e.*, A, C, E mutilated) only are found; of the Second Set only the formulas A, B, D and E. In the distribution of these texts, no particular order is observable. Sometimes the text of a set occupies a whole page by itself; at other times, two or three (never all four) texts are combined on one page. This will be best seen from the Table of analysis of the pages, given below.

If a single text occupies a page by itself, it is always printed in 3 to 5 columns, generally running parallel to the longer side of the book, and consisting of 4 to 6 impressions of the formula, according to the size of the latter. See below the diagrams of pages 8, 9, 11, 12, 59, 60. If a single text occupies several consecutive (from 4 to 12) pages, the columns always stand upright and reversed on alternate pages.

If several texts together occupy the same page, they are arranged in the most varying order. No principle that may have guided the printer is observable. The subjoined diagrams illustrate this; the arrangements shown are only a few out of a much larger number. The formulas of the Fourth and Fifth Sets are indicated by *a b c* and *1 2 3* respectively; those of the First and Second Sets by *I**f*, *I**g*, *I**h*, and A, B, D, E respectively.

Page 4.	Page 5. (Pl. XIII.)	Page 6.	Page 7.
$\nabla \begin{matrix} q I \nabla \\ q I \nabla \\ q I \nabla \\ q I \\ q I \\ q I \\ q I \\ q I \nabla \\ q I \nabla \\ q I \nabla \end{matrix} \begin{matrix} f f I \\ f f I \\ f f I \\ f I \\ f f I \\ f f I \\ f f I \\ f f I \\ f f I \\ f f I \end{matrix}$	$\begin{matrix} I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \end{matrix} \begin{matrix} I f I f I h \\ I f I f I h \\ I h \\ D \\ I h \\ I h \\ I h \\ I f I h \\ I f I h \\ I f I h \end{matrix}$	$\begin{matrix} I h \\ I h \\ I h \\ I h \\ I h \\ I h \\ I h \\ I h \\ I h \\ I h \end{matrix} \begin{matrix} f f I f \\ f f I f \\ f f I f \\ E \\ I f \\ I f \\ I f \\ I f \\ I f \\ I f \end{matrix}$	$\begin{matrix} I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \\ I g \end{matrix}$
Page 8.	Page 9.	Page 11.	Page 12.
$\begin{matrix} f I f I f I f I \\ f I f I f I f I \\ f I f I f I f I \\ f I f I f I f I \\ f I f I f I f I \\ f I f I f I f I \\ f I f I f I f I \end{matrix}$	$\begin{matrix} I f I f I f I f \\ I f I f I f I f \\ I f I f I f I f \\ I f I f I f I f \\ I f \\ I f \\ I f \\ I f \\ I f \end{matrix}$	$\begin{matrix} a b c a b c a b c \\ a b c a b c a b c \\ a b c a b c a b c \\ a b c a b c a b c \end{matrix}$	$\begin{matrix} \circ q v \circ q v \circ q v \\ \circ q v \circ q v \circ q v \\ \circ q v \circ q v \circ q v \\ \circ q v \circ q v \circ q v \end{matrix}$

Page 48.	Page 49.	Page 59.	Page 60.
$abc \delta I \varrho q v$ $abc \delta I \varrho q v$ $abc \delta I \varrho q v$ $abc \delta I \varrho q v$ $abc \delta I \varrho q v$	$abc Ig abc$ $abc \delta I abc$ $abc \delta I abc$ $abc \delta I abc$ $abc \delta I abc$	$I f$ $I f$ $I f$ $I f$ $I f$ $I f$ $I f$ $I f$ $I f$ $I f$	$f I$ $f I$ $f I$ $f I$ $f I$ $f I$ $f I$ $f I$ $f I$ $f I$

Page 47.	Page 91.	Page 139.
$abc \delta I abc$ $abc \delta I abc$ $abc B abc$ $abc \delta I abc$ $abc \delta I abc$	$abc I^h abc$ $abc I abc$ $abc \eta I$ $abc I^h abc$ $abc I abc$	$abc abc$ $abc 123$ $abc abc$ $abc 123$ $abc abc$

Page 140.	Page 163.	Page 164.
$123 123$ $123 123$ $123 123$ $123 123$ $123 123$ $123 123$ $123 123$ $123 123$	$\delta I Ih A If$ $Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$ $\delta I Ih A If$	$Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$ $Ig \delta I \delta I$

I have taken the trouble to analyse the whole of the pages with reference to the frequency of occurrence of the several formulas and their combinations. The result is shown in the subjoined Table. The formulas of the Second Set (A, B, C, D), except where stated otherwise, occur only once on the page.

Formulas.	Pages of Occurrence.	Frequency.
Sets IV.	... 11-18, 23-27, 30, 39-42, 51-58, 67-70, 75-82, 87-90, 92, 94, 99-102, 107-118, 131-134, 140-150, 155-162	Total 80
Set V	... 28, 29, 140, 141	4
Sets IV and V	... 139, 142	2
Set IV and Set Ig	... 48, 49	2
Set IV and Set Ih	... 91	1

Formulas.	Pages of Occurrence.	Frequency.
Sets IV, IIA and <i>If</i> ...	93 ...	1
Sets IV, IIB and <i>Ig</i> ...	47, 50 ...	2
Sets IIA and <i>Ifh</i> ...	3 ...	1
Sets IIA and <i>Ifgh</i> ...	97, 163 (a row of A on 163) ...	2
Sets IID and <i>Ifh</i> ...	95, 98, 151 ...	3
Sets IID and <i>Ifgh</i> ...	5 (D twice), 153 (D thrice) ...	2
Sets IIE and <i>Ifh</i> ...	2 ...	1
Sets IIE and <i>Ifh</i> ...	6, 152, 154 ...	3
Sets IIE and <i>Ifgh</i> ...	96 ...	1
Sets IIAE and <i>Ifh</i> ...	4 (E once, two rows of A) ...	1
Sets IIAE and <i>Ig</i> ...	164 (E once, row of A) ...	1
Set <i>If</i> ...	8, 9, 43-46, 59-62. ...	10
Set <i>Ig</i> ...	7, 10, 19-22, 35-38, 63-66, 83-86, 103-106, 119-130, 135-138 ...	38
Set <i>Ifh</i> ...	31, 33, 71-74 ...	6
Set <i>Ifgh</i> ...	1, 32, 34 ...	3
Total pages ...		164

The combination of formulas in different scripts on the same page seems to suggest some sort of correspondence or identity. It is difficult, however, to fit the varieties of the combinations into a consistent theory. Possibly this may be due to misprints. Provisionally I would suggest the following theory. Books Nos. I and II seem to show that the formulas of Set IIC, Set IV, and Set V correspond to one another. Now pages 47-50 show formulas IV and *Ig* in combination; and it may be also noted that these two particular formulas occur most frequently by themselves in book No. III; *viz.*, formula IV, 80 times, and formula *Ig*, 38 times. Assuming that formula *Ig* is equal to formula IV, the combination on page 2 (*viz.*, IIE and *Ifg*) would tend to identify formula *If* with formula IIE. Consequently the combination of formulas IIA and IIE with formulas *If* and *Ih* on page 4, would identify formula *Ih* with formula IIA; and in corroboration of this equivalence it may be noted that on pages 4 and 163, there are whole columns of IIA and *Ih* corresponding with each other. At the same time this theory does not seem quite consistent with the combination of the formulas *If*, IIA, and IV, on page 93. As formula IV is assumed to be equal to formula *Ig*, it seems to follow that *If*=IIA; and with this conclusion agree the two facts that on page 4 the formulas *If* and *Ih* are combined with the formulas IIA and IIE, and that on pages 4 and 163 columns of IIA correspond to columns

of *I**f*. In fact, these two facts fit in equally well with both theories. The result accordingly would be

$$\begin{aligned} \text{formulas IV} &= \text{V} = \text{II C} = \text{I}g; \\ \text{I}f &= \text{II E} \text{ or } = \text{II A}; \\ \text{I}h &= \text{II A} \text{ or } = \text{II E}. \end{aligned}$$

SEVENTH SET.

This Set comprises six books. The text contained in it consists of seven lines. The dimensions of its block cannot be given, as no traces of any enclosing lines are seen in any of the books. The dimensions of the text itself are about $3\frac{1}{2} \times 3\frac{3}{4}$ ".

With regard to the question what is top and bottom, right and left, beginning and end of the formula, the following circumstances may be noted. In book No. 1, about one-half of the formula, divided horizontally, is occasionally found; similarly in book No. IV, also about one-half of it, but divided vertically, is occasionally met with. The two halves that are thus found are invariably the same. On the assumption that, if only a portion of the formula could be accommodated, the printer would naturally choose to print its initial portion, it follows that the two halves, between them, accurately define the corner which contains the beginning of the formula. This is the upper left corner or the upper right corner, according as one has to read the lines of the formula in the European or the Chinese fashion. In the facsimile on Plate XIV, the formula is represented in the position conforming with the view here explained. The argument, however, is by no means, conclusive, as it pre-supposes that the books were intended for intelligent reading, not merely for the mechanical turning of pages.

Another point that may be worth noticing is that some of the letters of the formula of this Set and of that of the Fourth Set show considerable similarity.

No. I. BOOK. (Plate XIV, fig. 2.)

Belongs to M. 9. Size, $17\frac{1}{4} \times 6\frac{1}{2}$ ". Number of forms, 20. Paper, variety III*d*. Well preserved; no burns; but paper greasy, and print rather indistinct. Bound with three twists of paper.

Text printed in one column on each page, running parallel to the longer side of the book, and containing, as a rule, four impressions of the formula. This arrangement allows a wide margin at the top and bottom of each page; accordingly on a few exceptional pages (about half a dozen) a half-impression is added to fill up the blank space. As this is always the same half-impression (*viz.*, lines 1-3 or 1-4), it may possibly indicate the beginning of the formula; and I have so used it

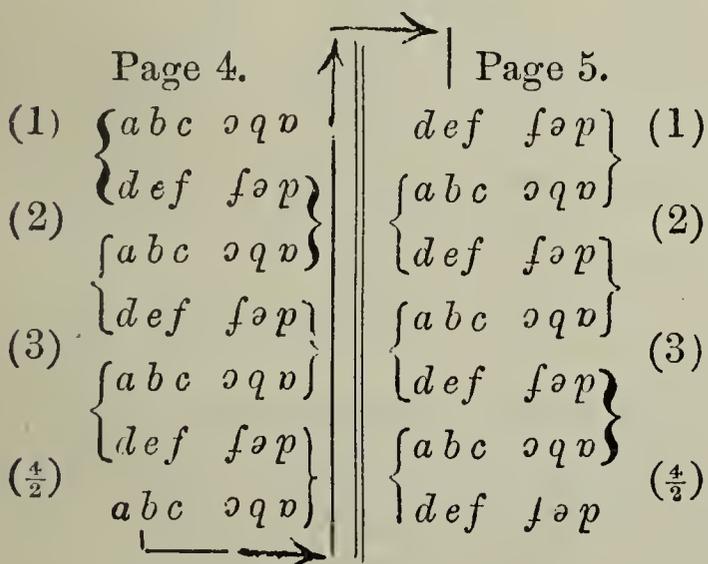
for the arrangement of the formula on Plate XIV; but the argument only holds good, if the book was intended for reading, which is doubtful. As a curiosity I may note the arrangement on page 1 of form 8; I have not noticed it elsewhere. Between the 3rd and 4th impression of the formula, there is inserted an impression of the first line by itself. This is probably a mere misprint; though it is not quite easy to understand how it happened. For as the uniformity of the intervals of the lines shows, these lines were not printed each by itself; on the other hand, if the block was twice applied to the paper, in different places, the paper should show smudges of ink, which it does not do.

The columns stand regularly, without any exception, upright and reversed on alternate pages.

No. II. BOOK.

Belongs to M. 8. Found at Kiang Tūz. Size, $14 \times 9''$. Number of forms, 12. Paper, variety III*d*. Surfaces greased, and print rather indistinct; otherwise well preserved. Riveted with three nails.

Text, printed in two columns on each page, running parallel to the longer side of the book, and standing alternately upright and reversed on the same page, but keeping the same position on alternate pages, as shown in the diagram on the margin. Each column



consists of four impressions (*abc def fop*) of the formula, but as the space is barely sufficient to accommodate them, not unfrequently one or two lines of the formula are omitted at the top or the bottom of the page; and, whenever this occurs, the mutilated portions are arranged so as to make up, between them, a complete

formula. The intention, evidently, seems to be that the left hand columns and the right hand columns respectively should be read consecutively throughout the book, as indicated by the arrows in the marginal diagram. The four impressions are placed so as to keep the corresponding lines as much as possible on a level with one another.

No. III. BOOK.

Belongs to M. 8. Found at Kiang Tūz. Size, $12\frac{3}{4} \times 8\frac{1}{4}''$. Number of forms, 20. Paper, variety III*d*. Surfaces greased, and print rather

indistinct; otherwise well preserved. Bound with three twists of paper. Printing stops on the penultimate, but begins, as usual, on the fourth page.

The arrangement of the text is exactly the same as in No. II, except that the columns only consist of three impressions of the formula, whence a wide margin is left at the top and bottom of every page. There are, however, four exceptional pages, probably misprints, on which the columns run in the same direction.

No. IV. BOOK.

Belongs to M. 8. Found at Kiang Tüz. Size, $13 \times 8\frac{3}{4}$ ". Number of forms, 20. Paper, variety III*d*. Surfaces greasy, and print rather indistinct; otherwise well preserved. Bound with two nails.

Text printed in three columns on each page, running parallel to the narrower side of the book, and consisting each of two impressions (*a b c d e f*) of the formula. The columns, as a rule, run in the same direction (*e.g.*, pp. 4, 5); but there are many exceptions (*e.g.*, pp. 8, 9), as shown in the subjoined diagram.

Ordinary.				Exceptional.			
Page 4.		Page 5.		Page 8.		Page 9.	
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>
<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>	<i>abc</i>	<i>def</i>

The three columns do not fill up the whole available space; there is a wide margin on both sides. Accordingly on 14 pages (out of a total of 74 printed ones) a half-column is added, consisting of two half-

impressions of the formula divided vertically. As a rule, this half-impression stands on the margin of the same side, but on page 16, shown on the margin, it stands once on the left, and once on the right margin. As it is invariably the same half of the formula, this circumstance might be considered to indicate the side with which the formula commences; and I have used it for that purpose in arranging the facsimile on Plate XIV. But, as already observed, the argument is not altogether conclusive.

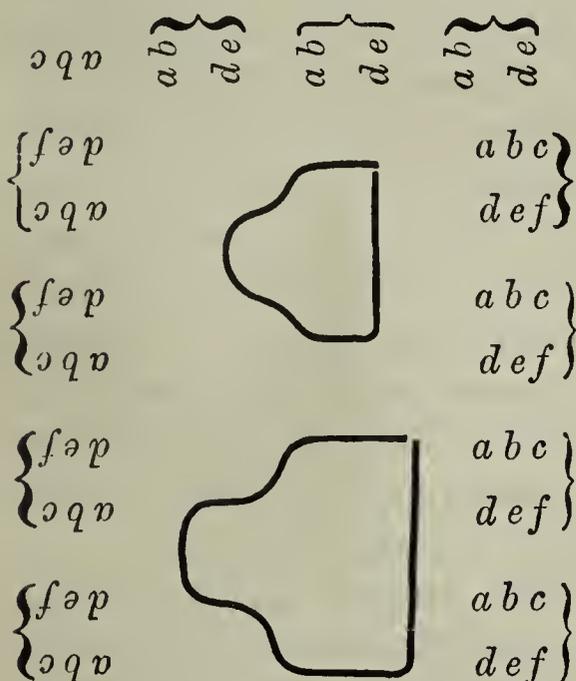
Page 16.	
(1)	<i>abc</i> <i>def</i>
(2)	<i>abc</i> <i>def</i>
(3)	<i>abc</i> <i>def</i>
(1/2)	<i>abc</i> <i>def</i>

No. V. BOOK.

Belongs to G. 10. Size, $17\frac{1}{2} \times 14''$. Number of forms, uncertain, as they are all cut through, along the folds, into separate leaves; the latter number 41; but possibly one leaf is torn off. One of the existing outside leaves is torn in shreads. Paper, variety IIIb. Surfaces greasy, and print indistinct; otherwise fairly well preserved; no burns. Printing commences on the second, and ends on the penultimate page of the now existing leaves. Riveted with three nails, the guards being round pieces of copper resembling coins, like fig. 4-9 on Plate IV.

Text printed in three columns on each page, running parallel to the longer side of the book, and consisting each of four impressions of the formula, which, accordingly, is repeated 12 times on every page. The columns stand upright or reversed on different pages; but there is no perceptible order in this respect.

Page 44.



On one of the pages of the 22nd leaf, there is seen the sketch of a man's bust, twice repeated side by side, one somewhat smaller than the other. See Plate XVIII. They were evidently sketched on the page, before the formula was printed around them, as the arrangement of its impressions is adjusted to the sketches, running regularly round them. The sketches are placed horizontally across the page, as indicated by the two figures in the marginal diagram.

No. VI. BOOK.

Belongs to G. 8. Purchased for Rs. 45. Size, $22 \times 13''$. Number of forms, 43. Paper, variety IIIc. Rather clean, but many leaves torn, on account of large size and flimsiness of paper. Print not very distinct. Riveted with three nails, the guards being regular oblong pieces ($1\frac{1}{2} \times 1\frac{3}{4}''$) with rounded corners, showing embossed head and symbols, as seen in fig. 1 of Plate IV.

Text printed in three columns on each page, running parallel to the longer side of the book and consisting each of six impressions of the formula. They stand, as a rule, upright and reversed on alternate pages.

EIGHTH SET. (Plates XIV, fig. 3 and XV, fig. 1.)

This set comprises only one book. It belongs to G. 9. It was purchased by Sayyid Gul Muhammad, a well-known Kashghar merchant, for forty rupees and was sent, as a present, to Captain Godfrey. The book, of course, could not be accepted as a present, but it was purchased on behalf of the British Government. It measures $11 \times 6\frac{1}{8}$ ". The exact number of its forms is unknown, for the beginning and end are missing, and a large number of leaves exist only in fragments. The number of still complete forms is 29; most of these even are more or less damaged along the edges. The book is bound with three copper nails, and the guards are formed of two thin copper slips, measuring $8 \times \frac{3}{4}$ ", and covered with ornaments like those on figs. 4–9, Plate IV.

Irrespective of its script, this book strikingly differs in several points from the books comprised in all the previously described seven sets. In the first place, it is clean; there is no trace of any burn or fatty stain. In the second place, the paper, to all appearance, is of an entirely different quality. It is thin and soft and more nearly resembles the paper of the Weber and Macartney Manuscripts procured from Kuchar. It differs, however, from their paper in colour; for while their paper is white or whitish, the paper of this book is of a bright yellowish-brown. It looks as if it were artificially tinted; but the colouring, if any, is fast, for it is tolerant of washing. It is a pity that its find-place is not known; but that it comes from some spot in the Takla Makan is shown by the fact of all its leaves being, like those of all the other blockprints, very thickly covered with the fine yellow sand of the desert. Another curiosity is that a small special formula, which occasionally occurs in it, is printed with an apparently faded, red-coloured fluid, which almost resembles blood. Its ordinary formula is, as usual, printed with black ink. Minor peculiarities are the following: (1) most of the existing leaves show a clean cut on one of the narrow sides, (2) two of the pages have the text printed diagonally across them, and (3) a few leaves are only printed on one side. The last mentioned peculiarity is due to the extreme thinness of the paper, owing to which the print on one side shows through on the other. The leaves have, as in the case of all other block-printed books, frayed edges, but in the present case one of the narrower sides of most leaves has been clipped with a sharp knife or scissors, for it shows a clean cut, which occasionally passes right through a line of print, showing that the clipping was not done with little care.

The text of the book consists of two formulas which I shall call VIII *a* and VIII *b*. The formula VIII *a* consists of three long lines, containing apparently about 16 letters each. It is the proper formula

of the book, as it covers every printed page but one. Formula VIII *b* is evidently a special one; it is very small, consisting of four lines, of 2, 3, 3 and 6 letters; and it is only found on a very few pages. On one page it is found twice, printed in the middle and at the top of it, the rest of the page being filled with the ordinary long formula VIII *a*. On two other pages it is found similarly at their top; and lastly there is one leaf, on which it occupies the entire surface of both pages. Curiously enough this is an isolated leaf, which is stuck in between the two leaves of a folded form. But from the page which exhibits the double imprint of formula VIII *b* (see Plate XV, fig. 1) it is evident, that both formulas were printed at the same time; for the needful space (though only just barely sufficient) is purposely left for formula VIII *b* between the impressions of formula VIII *a*.

The latter formula is printed ten times in a column on each page; the column running parallel to the longer side of the book. Within the column the impressions of the formula stand, as a rule, upright and reversed alternately; though occasionally two upright or two reversed impressions follow consecutively, as may be seen on the facsimile page in Plate XV, fig. 1.

Formula VIII *b* is also printed in a column consisting of ten lines of impressions; but each line itself is made up of four impressions, standing alternately upright and reversed; so that the formula is repeated 40 times on each of the two pages of the leaf the surface of which it entirely occupies. On all other occasions (as on the facsimile page) where formula VIII *b* occurs, it only occupies one line consisting of four impressions.

Among the fragments, found by me with the book there are two, which have a peculiar interest in bearing, in addition to the ordinary formula VIII *a*, a second small text, which I shall call formula VIII *c*. One of the fragments consists of a very narrow oblong sheet, folded in the middle into two leaves. Each of these leaves (see fig. 3 on Plate XIV) measures $6\frac{1}{8} \times 3$ " ; and shows a clean cut along either of its long sides. As these sides measure exactly the same as the breadth (or narrow side) of the book; it seems probable that the whole oblong sheet is simply a slip cut out of one of the forms of the book. And seeing that the slip is nearly blank on one side, it is further probable that the form, from which it was cut, was one of the outside, or covering, forms of the book which are now missing. The other piece is of a very irregular rhomboid shape, being apparently a piece torn off one of the leaves of one the outside forms of the book; for it shows on one side three full and one fragmentary imprints of the ordinary formula VIII *a* in the usual column arrangement, while the

other side must have originally been blank, but is now covered with imprints of formulas VIII *b* and VIII *c* in a promiscuous and disorderly way.

NINTH SET. (Plate XV, figs. 2 and 3, and Pl. XVI.)

This set comprises two items, a roll and a book. The latter, when received, was enclosed in a carved wooden box; and the former probably was also originally within it. The whole belongs to G. 10. It was received by Captain Godfrey from Leh, and is said to have been dug out in the Takla Makan, which, seeing that it is more or less thickly encrusted with the fine yellow sand of the desert, is probably correct. But it is a pity that the exact find-spot is not known.

No. I. THE BOX.

The box (Pl. XV, fig. 2) has a height of $4\frac{1}{8}$ " ; its diameter externally is $4\frac{1}{4}$ " , and internally, $3\frac{1}{2}$ " ; inclusive of the projecting carved figures, its breadth is $4\frac{3}{4}$ " . It is drilled out of one piece of wood, and is ornamented with six carved projections, which run, like pillars, round it parallel with the length of its wall, and at equal distances (about 1") from one another, and consist alternately of standing human figures and inscribed boards. Close to one of the figures, there is a crack right through the wall of box, gaping asunder about $\frac{1}{4}$ of an inch. Above the head of the next figure to the right, there is a large semi-circular notch cut into the rim (shown on Pl. XV), and there is also a smaller triangular one over the inscribed board which stands between those two figures. These notches seem to have been made intentionally. There are also two small, irregular holes in the wall (one shown on Pl. XV), nearly opposite to each other, but these appear to be due to injury. There is no lid to close the box; nor do appearances point to its ever having had any. The projections go down to the bottom of the box, but do not reach quite to the edge of the rim, being short of it by $\frac{3}{8}$ of an inch.

Of the three human figures, one is represented with his arms a-kimbo, his hands resting on his abdomen (shown on Pl. XV), while the other two figures have their arms hanging down straight by their sides. There are some similar crude figures of copper in the collection, which will be described in the section on Miscellaneous Objects. All three figures on the box appear to be represented nude. Two of them (including the one with the arms a-kimbo) bear curious lines marked regularly across both sides of the chest and upper arms. They might be intended to denote a short jacket; but similar lines are used to mark the hair on the heads of all three figures. This hair is marked very regularly, long hair with a parting in the middle. One of the figures—

he with the arms a-kimbo—has also a beard, marked by similar lines all round the lower part of the head. The other two are represented beard-less. The heads are made disproportionately large; and altogether the figures are very crude.

The three bands (Pl. XV, fig. 3) of writing are oblongs, measuring about $3\frac{3}{4} \times 1''$. One of them is divided, by indented lines, into three nearly equal compartments. Their top and bottom seem to be clearly indicated by their correspondence to the heads and feet of the figures. They are shown on the Plate in the position thus indicated. Accordingly the legend of No. II which consists of two lines containing each six symbols must be read either from top to bottom, or from right to left. The legend of No. I appears to consist of a narrow column of nine short lines, each containing three or four symbols. The three compartments of No. III seem to contain 3, 2, 3 short lines respectively. The probability seems to be that all the legends run from the right to the left.

On Plate XV, fig. 4 I show an inscription which exhibits a curious *primâ facie* resemblance to the writing on the bands. This inscription stands on a hone of slate, measuring $5 \times 1''$. It was found at Mazyhund, close to Tiran, at the foot of Mahaban in the Swat country, and brought to Major Deane, who very kindly gave it to me to be added to the British Collection of Central Asian Antiquities.

No. II. THE ROLL. (Plate XVI).

The roll measures $16\frac{3}{4}$ by $4\frac{3}{8}$ inches. The paper is very different in texture from that of the block-prints books comprised in Sets I to VIII. It is exceedingly thin, tough and hard; it is also oiled or greased, apparently as a kind of sizing, to tolerate being printed on. When washed, it shows a very light yellowish or creamy tint. In general appearance it resembles thin parchment. It is only printed on one side, the paper being so thin that the print of one side shows through on the reverse, wherever there is an excess of ink, as in lines 8–11, 30–33, 38, 39. For that reason, clearly, the ink was, as a rule, put on very sparingly, so that in many lines the print is so fine as to be almost illegible.

The roll is covered with 45 lines of print, which run parallel to its narrow sides, and which contain each from 13 to 15 symbols. A closer inspection reveals the fact that this text of 45 lines consists of five formulas, which are repeated at irregular intervals, and each of which comprises two lines of the text. I shall distinguish these five formulas as IX¹, IX², IX³, etc. The two lines of the several formulas are made up of a number of symbols varying from seven to fourteen. Sometimes, as in lines 8 and 9, which comprise formula IX⁴, the lines

of the formula practically coincide in length with the lines of the text. In other cases, as in lines 20 and 21, comprising formula IX², the lines of the formula are much shorter than those of the text. In these cases the latter lines are filled up with repetitions of the formula, in a more or less complete state.

Formula IX¹ occurs five times, in lines 2 and 3, 16 and 17, 24 and 25, 34 and 35, 44 and 45. Accordingly, considering that there are two columns, the formula is repeated ten times. In lines 2 and 3, it stands reversed; in all the other lines, it stands upright.

Formula IX² occurs six times, in lines 4 and 5, 10 and 11, 20 and 21, 22 and 23, 30 and 31, 38 and 39. Altogether it is repeated twelve times on the roll. This formula and the fourth are the only ones in which the symbols stand sufficiently apart to permit of being discriminated and counted. Its first line consists of eight, and its second line, of seven symbols. The second (or sixth, according as the series is read from the left or right) symbol of the latter line has a striking resemblance to the Sanskrit (Brāhmī) letter for *a*, as written in North-India about 800 A.D.; but this must be a mere accidental coincidence, as no resemblance can be seen in any of the other symbols.

Formula IX³ occurs three times, in lines 6 and 7, 12 and 13, 14 and 15. The number of symbols comprised in its two lines is uncertain; probably 11 and 13 respectively.

Formula IX⁴ occurs twice, in lines 8 and 9, 32 and 33. Both lines appear to consist of eleven symbols.

Formula IX⁵ occurs six times, in lines 18 and 19, 26 and 27, 28 and 29, 36 and 37, 40 and 41, 42 and 43. In the two pairs of lines 18, 19 and 26, 27 it stands reversed; in the other four pairs it stands upright. The two lines appear to comprise 12 and 14 symbols respectively.

No. III. THE BOOK.

Belongs to G. 10. Size $6 \times 4\frac{1}{4}$ ". Number of forms $34\frac{1}{2}$; many cut into separate leaves; number of leaves 69. No blank covers. Many leaves torn. Paper rather brittle, and of the same kind as that of the Roll No. II. Stitched with four loops of thread.

Contains the identical text of the roll; as a rule, arranged in columns, running parallel to the narrower side of the book; but on a few exceptional pages, they run parallel with the longer side. As in the roll, the formulas are repeated at irregular intervals, two or three formulas being found repeated on each page.

Map of
EASTERN TURKISTAN
TO ILLUSTRATE THE REPORT ON
CENTRAL ASIAN ANTIQUITIES

N. B.—Find-places are in red ink

Scale 1 Inch = 40 Miles.

